

UNIVERSITY OF WINCHESTER

“GEAR IS THE NEXT WEED”: A QUALITATIVE EXPLORATION OF THE
BELIEFS, ATTITUDES AND BEHAVIOURS OF PERFORMANCE AND IMAGE
ENHANCING DRUG USING SUBCULTURES IN THE SOUTH-WEST OF
ENGLAND

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Doctor of Philosophy

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This Thesis has been completed as a requirement for a postgraduate research degree of the
University of Winchester.

MPhil/PhD THESES

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Abstract:

Performance-enhancing drugs until relatively recently have been seen to be the preserve of sport-focussed athletes, but in recent years there has been an apparent increase in use amongst the general population, with individuals now using PIEDs not only to increase athletic prowess, but for image-conscious reasons entirely divorced from such ‘competitive’ notions.

This research explores the different types of PIED user training in gym environments today, identifying differences in ‘ethnopharmacologies’ between these groups, allowing them to be categorised by their beliefs, attitudes, and patterns of use, based on qualitative data gathered ‘in the field’ from a total of 27 respondents, including 14 in-depth interviews. This exploration further evidences the extent to which a ‘normalisation’ of PIED use is occurring.

Results suggest PIED users can be split into three categories, ‘sport-oriented’, ‘image-oriented’ and ‘hedonic’, with sport-oriented users conducting the most research, and having the most rigid cultural ‘disciplines’, and ‘hedonic’ users the least. This is evidenced through exploration of participants’ ‘decision to begin using’, their processes of ‘learning to use’ and their ‘longer term use’ of PIEDs, all of which suggest that patterns of use exist on a spectrum, from informed and cautious use employed by the most serious sport-focussed PIED users, to high-risk, high time-preference use associated with ‘hedonic’ users.

This divergence in ethnopharmacologies and behaviours between groups evidences the need for such a categorisation of users in future research and policy, particularly for harm-minimisation purposes, as well as offering in-depth qualitative contributions to findings reported in recent longitudinal studies. Further, these elements of use evidence an increasing normalisation of PIEDs, which appears to have been largely achieved, excepting a perception of ‘stigmatisation’ still faced by users, principally stemming from media portrayals of ‘roid rage’. This limitation to cultural acceptance is therefore addressed, with evidence suggesting ‘roid rage’ is a ‘myth’, and further that this stigmatisation is likely to decline as knowledge is transferred from using populations to their non-using peers, indicating ‘normalisation’ is occurring.

Declaration

No portion of the work referred to in the Thesis has been submitted in support of an application for another degree or qualification of this or any other University or other institute of learning.

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Finally, I would like to thank everyone who agreed to be interviewed for the project, who did so without compensation. Without them this work would not have been possible.

UNIVERSITY OF WINCHESTER

ABSTRACT

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Performance-enhancing drugs until relatively recently have been seen to be the preserve of sport-focussed athletes, but in recent years there has been an apparent increase in use amongst the general population, with individuals now using PIEDs not only to increase athletic prowess, but for image-conscious reasons entirely divorced from such 'competitive' notions.

This research explores the different types of PIED user training in gym environments today, identifying differences in 'ethnopharmacologies' between these groups, allowing them to be categorised by their beliefs, attitudes, and patterns of use, based on qualitative data gathered 'in the field' from a total of 27 respondents, including 14 in-depth interviews. This exploration further evidences the extent to which a 'normalisation' of PIED use is occurring.

Results suggest PIED users can be split into three categories, 'sport-oriented', 'image-oriented' and 'hedonic', with sport-oriented users conducting the most research, and having the most rigid cultural 'disciplines', and 'hedonic' users the least. This is evidenced through exploration of participants' 'decision to begin using', their processes of 'learning to use' and their 'longer term use' of PIEDs, all of which suggest that patterns of use exist on a spectrum, from informed and cautious use employed by the most serious sport-focussed PIED users, to high-risk, high time-preference use associated with 'hedonic' users.

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Keywords: [Ethnography, Youth Subculture, Masculinity, Drug, Normalisation, Performance Enhancing Drug, Steroid, PIED, IPED]

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Dramatis Personae

Owing to the qualitative nature of this research, the data presented shall frequently take the form of quoted extracts from interviews and in-the-field discussions. As readers may at times wish to know the biographies of the individuals cited, to add context to the narrative presented, this list is provided as a reference, which it is hoped shall act as a useful tool for contextualising assertions made in the main body of the research. The following is an exhaustive list of all persons directly quoted within the data chapters, arranged in first name alphabetical order, to reflect in-text citations.

Those respondents (n=14) who agreed to in-depth, tape-recorded interviews are marked with a * symbol. All others are cited either from non-recorded interviews (n=4), or from field diary entries (n=9). *All names listed are pseudonyms, as agreed with the university board of ethics.*

'Adam Brown' – Gym user (former PIED user)

'Adam' is in his mid-twenties, and has used one 'cycle' PIEDs, bought through a friend. Adam is an 'image-focussed' user, who is cited in relation to his approach to this 'cycle'.

'Big Steve' – Bodybuilder (PIED user, alleged supplier)

'Steve' is in his mid-fifties, and has been a competitive bodybuilder for decades. He uses PIEDs for body-building purposes. Although rumoured to be a supplier, Steve never admitted this in discussion with myself. Steve serves as a good contrast figure between 'old school' competitive bodybuilders, and the emerging, 'hedonic' youth-culture.

'Chris Brown' – MMA fighter (non-user)

'Chris' is in his late-twenties. He is a black belt in Brazilian jiu jitsu who competes in mixed martial arts (MMA) 'cage fighting'. Although not a PIED-user himself, he has familiarity with PIED use in the MMA scene, having been a fighter for many years.

'Colin Roberts' – Physiotherapy student/doorman (non-user)

'Colin' is in his late-twenties, and is referenced solely for his comments relating to the prevalence of young

men he sees whilst working ‘the doors’ who have physiques he can visibly tell, as a trainee physiotherapist, and weight-trainer himself, are not ‘natural’.

‘Dave Russell’ – Personal trainer (non-user)

‘Dave’ is in his forties, and one of the older PTs in a commercial gym. Although a non-user, Dave was considering using his first steroid cycle, as a means of furthering his training business. He is referenced in relation to what he perceived to be a standard ‘beginner’s cycle’ of testosterone, based on what he has heard from users in his gym.

'Dan Stevens' – Gym user (non-user) *

'Dan' is in his late-twenties, and trains for image. Although a non-user, has researched PIEDs, and suggests he intends to commence use at some point. He is referenced as an image-oriented trainer who is nonetheless cautious in his approach to PIEDs.

‘Dominick Moore’ – Rugby player/gym user (non-user)

‘Dom’ is in his early-thirties, and trains for strength and endurance. He is a regular face in local gyms, training in several. He is cited in relation to his criticisms of ‘Stavros’ (below), whom he has known since before Stavros became a prominent figure in the local “workout scene”. A sport-focussed trainer, Dom knows many PIED users, and can comment on the usage he witnesses.

'Eddie Michaels' – Gym user (PIED user) *

'Eddie' is in his late-twenties, and trains primarily for image. A former marine and rugby player, Eddie is keen on fitness, though admits his primary motivation for using PIEDs was image-oriented. Although 'image-focussed', Eddie follows strength-type routines, and reflects many traits found in 'competitive' users. Eddie's supplier is a friend who works in the medical profession, and is said to be extremely knowledgeable regarding PIEDs. He has friends who use for 'hedonic' purposes, and is knowledgeable regarding this subculture also. He also works in security.

'Harry Gorr' – Gym user (former PIED user)

'Harry' is in his mid-thirties, and trains primarily for image, though follows a strength-based routine, similar

to Eddie Michaels. A former marine, Harry has been involved in fitness for some time. He is friends with high-level commercial PIED Supplier 'Tyson Maxwell'.

'Ian Galton' – Doorman/powerlifter (PIED user)

'Ian' is in his late-twenties, and trains for both strength and size. His initial motivation for using PIEDs was to appear more intimidating, and be better able to handle himself, whilst working as a doorman. He has therefore used both for image, and for sport, though always with a practical, non-hedonic focus. He is familiar with PIED use amongst doormen.

'Johnathan Clark' – Gym user (licit-only PIED user) *

'Johnny' is in his late-twenties, and trains for fitness and image. He often trained with myself during the data collection period, so tends to follow a powerlifting-type routine. Johnny's interest in PIEDs is primarily medical, as he believes they could help both his chronic fatigue (attributed to "*low T*"), and injuries. He is dissatisfied with the NHS's dismissal of both issues. Johnny's story demonstrates some of the alternative reasons individuals might use PIEDs beyond common focusses. He has additionally used over-the-counter 'prohormones', so has some insight into such licit PIED use. He is undertaking a degree in chemistry.

'James Lahey' – Powerlifter (PIED user; commercial supplier) *

'Jim' is in his late-twenties, and a formerly-competing powerlifter. Although 'sport-oriented', Jim has dealt with 'hedonic' users on a regular basis as a supplier, and is familiar with all user types. Jim was the only 'commercial' supplier to agree to a tape-recorded (in-depth) interview. Jim was involved in both the importation, and production of PIEDs, in addition to supply. He has a degree in chemistry.

'Josh Perry' – Gym user (PIED user) *

'Josh' is in his late-twenties, and trains for image. Having begun using PIEDs as part of a group of friends in his late-teens, Josh is familiar with 'hedonic' use of PIEDs, and can offer insights into this emerging culture. He later used PIEDs for a '12-week challenge', and was advised in this by a personal trainer. Josh is looked up to by younger (image-focussed) gym-goers, who openly speak to him regarding their PIED use.

'Matthew Anderson' – Gym user, aspiring powerlifter (Non-user)

'Matt' is a non-user in his late-teens. As a young, 'natural' trainer, he has considered competing, but is wary of other competitors using PIEDs. His critical view of such individuals highlights the attitudes of many non-users, and is an interesting contrast to the older, PIED-using lifters, with whom his sentiments disagree. He also offers contrast to many gym-going young men, who seem less morally opposed to PIED use than he is.

'Mariusz Filipović' – Wrestler, fighter, powerlifter (PIED user; social supplier) *

'Mariusz' is in his early-thirties, and competes in numerous sports, including powerlifting, Muay-Thai kick-boxing, and American-style professional wrestling. Mariusz is familiar with PIED use as pertains to both fighters and powerlifters, and having trained in numerous gyms, also has first-hand experience of 'hedonic' users. Mariusz's best friend is Rose (below), and he thus also has knowledge regarding medical applications of PIEDs. He has also ordered PIEDs online.

'Michael Marlow' – Breakdancer (Non-user)

'Mikey' is in his late-twenties and a breakdancer. He is cited solely in relation to a discussion in which he mentions the prevalence of human growth hormone use amongst 'breakers', which is used to evidence the health-focussed nature of some sport-oriented PIED use.

'Mark Osbourne' – Personal trainer (Non-user) *

'Mark' is in his late-twenties, and worked as a personal trainer in a commercial gym, additionally competing in drug-tested powerlifting competitions. Having trained individuals who used PIEDs, and having worked in an environment where he witnessed many others using PIEDs, Mark is very familiar with use, especially as relates to the more casual, 'image-focussed' culture. He offers particularly clear insight into the practices of personal trainers supplying and giving advice to clients who wish to use PIEDs, having been around such practices for some time. He has a degree in strength and conditioning.

'Martin Walker' – Powerlifter (PIED user) *

'Martin' is in his mid-to-late thirties, and competes in 'untested' powerlifting competitions. Although sport-oriented, Martin has friends in 'hedonic' user, and doormen subcultures. He has also ordered PIEDs online. Martin spent several years researching PIEDs, and is highly knowledgeable, despite little formal education. He works a skilled blue-collar job.

'Pete Robinson' – Trainee personal trainer/'lad culture' member (Non-user) *

'Pete' is in his early-to-mid-twenties, and works at a commercial-type gym, training primarily for strength. In spite of this, he is part of a group who participate in what he terms "lad culture", an hedonic, image-focussed culture of training and partying, heavily associated with PIED use. As the only current member of this subculture interviewed, Pete offers a great degree of insight into the motivations and attitudes of his friends, which are likely applicable to many of the young men involved in this scene. Pete also knows a number of personal trainers and more serious PIED users through his work, so can offer insight into many areas of use, and youth culture.

'Rafael Anjos' – Personal trainer (Non-user)

Rafael is in his early-thirties, and works as a personal trainer in a 'commercial' gym. He is cited solely in relation to his perceptions of prevalence of use, and the frequency with which personal trainers are approached for advice regarding use.

'Richard Locke' – Powerlifter (PIED user; social supplier) *

'Rich' is his late-twenties, and trains for powerlifting. He is a close friend of Jim, and learnt to use PIEDs through him. Rich has trained both in 'hardcore' powerlifting gyms, as well as commercial-type gyms, and previously sold PIEDs to an image-oriented friend, demonstrating his familiarity with this user group. Rich had a particularly notable negative experience with PIEDs following cessation, and offers invaluable insight into this area. He has a degree in social sciences.

'Robert Cowan' – Sports physiotherapist (Non-user) *

'Robert' is in his early-forties, and works as a sports physiotherapist. He also participates in rugby, cycling, and drug-free powerlifting. Robert treats many individuals who are PIED-users, and additionally sees and speaks to many in the gym, and at rugby. He has a vast knowledge of patterns of use amongst both image-focussed individuals and sport-oriented users, since he is a figure of trust in the gym-going community. Working within a gym complex additionally gives him insight into how personal trainers and management approach PIED use. He holds a master's degree in physiotherapy.

'Rose Smith' – Powerlifter (PIED user) *

'Rose' is in her late-twenties, and the only female participant in the research. She trains for powerlifting,

though began using PIEDs as a means of combatting her hypomobility syndrome, which caused her severe pain and distress. She offers insight into the use of PIEDs as an alternative medical treatment, but simultaneously is deeply embedded in the powerlifting scene, having achieved the European qualifier standard. She and Mariusz ordered her PIEDs online from a lab in China, so she is additionally informed regarding this method of acquisition. She also has a science degree.

'Shaun Grayson' – Gym user (Non-user)

'Shaun' is a natural trainer in his early-20s. Although he does not use PIEDs, Shaun was nonetheless offered steroids by a barber based on his physique, demonstrating the seeming normality with which such offers are made. He is referenced solely in relation to this incident.

'Stephen Hitchens' – Gym owner (Non-user) *

Stephen is a gym owner in his early-forties. He has been running a gym for over fifteen years, and has spoken to many individuals involved in the use of PIEDs, as well as those on the fringes of using subcultures. He offers particularly acute insight into the changing face of PIED use within the gym environment, including the rise of the hedonic 'workout culture' amongst young men in recent years, and its overlap with party-focussed 'lad culture'.

'Simon Marsh' – Gym user (PIED user; social supplier) *

Simon is in his late-twenties, and uses PIEDs primarily for image. Having first been exposed to PIEDs in prison, Simon began using upon his release, and trains as a means of overcoming insecurities, and building self-confidence. He has bought PIEDs through several sources, and has participated in social supply, to another image-focussed, though more 'hedonic' user. His experiences of negative effects, and his takeaway from this, are of particular significance.

'Tyson Maxwell' – Gym user, PIED supplier (PIED user; commercial supplier)

'Tyson' is in his late-thirties, and uses PIEDs for image. Tyson is a former 'drug dealer' who, as a steroid user, realised there was a lucrative market in supplying PIEDs, with less risk involved than in the supply of 'harder' drugs. Tyson did not agree to a recorded interview, owing to fears I might pass this on to police, however agreed to sit down and talk for 15 minutes – a conversation I documented in a notebook. He is cited in relation to the types of individuals he sells to, and how his business is tailored to emerging market trends.

Other Significant Figures (Non-Respondents):

'Stavros' – Non-interviewee, referenced in-text (PIED user, commercial supplier)

'Stavros' was not interviewed in the course of this research, however was frequently discussed by others, as a well-known personality in the local area. Stavros is a competitive strongman/powerlifter and PIED user/supplier who also works as a personal trainer, and previously worked as a doorman. He is often cited as an example of an extreme, sport-oriented user. He is in his late-twenties, and has a bachelor's degree in mathematics.

'Mike', 'Jean', 'Ryan' and 'Stickman' – Non-interviewees, referenced in-text (PIED users, social suppliers)

Named members of Pete Robinson's group of hedonically-using friends, and part of the emerging 'lad culture'. These persons were only referenced by Pete, though are worth distinguishing by name for the purposes of analysing the behaviours and beliefs of this youth subculture. All refused to be interviewed upon learning through Pete that I worked at Devon and Cornwall Police Headquarters, despite assurances of anonymity.

All individuals cited (interviewees and others) are white, except Adam Brown, who is mixed-race black-and-white, and Rafael Anjos, who is of mixed Brazilian heritage, reflecting the local population, which is 98.4% (West-Devon) to 98.7% (Mid-Devon) white (2011 Census Data). All are of British nationality except Dave Russell (South African), Mariusz Filipović (Polish), and Rafael Anjos (Brazilian). All except Rose Smith are male.

Tyson Maxwell, Harr Gore, 'Big Steve', and Chris Brown all spoke to me and answered specific questions in interview, though did not (or would not) do so on tape: Tyson and Steve did not wish to be recorded admitting to illegal activities; Chris and I spoke after a BJJ class when I did not have a recording device to hand; Harry and I spoke in his car on the way to and from meeting Tyson.

Adam, Colin, Dom, Dave, Ian, Matt, Mikey, Rafael and Shaun are quoted solely from field diary entries, generally recorded following an interesting conversation between sets in the gym. In each case I wrote down

what they had told me for my records at the earliest opportunity, generally within an hour of the conversation. All were aware of my research, and that I was gathering in-field data.

All other respondents (n=14, marked * above) agreed to full, in-depth recorded interviews, and are thus quoted *verbatim* in the main body of text. Where they are further quoted from field diary entries, or personal correspondence (email or SMS), this is made clear in-text.

'Stavros' did not speak to me, despite my reaching out to him over Facebook, however is frequently cited by other users, thus appears in-text. Other individuals are additionally paraphrased in sections of the work, without being named, when the identity of the person making the statement was not deemed important (e.g. when the opinion of a general 'gym user' is being cited). Such instances are anonymously cited as "field diary [date]". Data explicitly drawn from the researcher's personal experience or observations is pre-fixed as such in-text (e.g. "I observed"), however my biography and consequent preconceptions and positionality are discussed in chapter two, to acknowledge that data is necessarily drawn from my experiences at times in ways which are not made explicit in the text.

Interview Schedule

This page details the schedule of interviews conducted for this project. 18 in-depth qualitative interviews were conducted, of which 14 were tape-recorded. This page may be used as a reference tool for those readers interested in the chronology of discussions cited in the main text body (field diary entries and personal correspondence will be dated at point of citation). Interviews took place over a 14 month period from March 2015 to May 2016. Field diary entries extend from early-2014 to August 2017, the duration of the project.

Interviews

- 25.03.2015 – Martin Walker and Jim Lahey.
09.04.2015 – ‘Big Steve’ (*Non tape-recorded*)
30.04.2015 – Josh Perry
19.05.2015 – Simon Marsh
01.06.2015 – Mark Osborne
02.06.2015 – Richard Locke
08.06.2015 – Robert Cowan
09.06.2015 – Rose Smith
08.09.2015 – Stephen Hitchens and Johnny Clark
20.09.2015 – Chris Brown (*Non tape-recorded*)
23.09.2015 – Eddie Michaels
26.09.2015 – Dan Stephens
12.10.2015 – Mariusz Filipović
20.02.2016 – Pete Robinson
14.05.2016 – Harry Gore and Tyson Maxwell (*Non tape-recorded*)

Introduction

The use of performance enhancing drugs is as old as sport itself (Voy 1991), and despite the introduction of regulation of these drugs in many sporting endeavours, remains common today (Waddington 2000; Walsh 2007), especially in those sports that do not employ drug testing policies, and thus to some extent embrace use (Bell 2008*i*). Similarly, drugs utilised for aesthetic enhancement have a long history, with historical trends in ‘popular’ image-improvement drugs showing a demand for such enhancement has existed at least since the beginning of the last century (Evans-Brown *et al.* 2012), although such drugs at that time were marketed primarily to young women, and not the young men who have come to be so synonymous with image-enhancement drugs today (Bleeker 2014).

In recent years, the use of performance and image enhancing drugs (PIEDs) has grown rapidly, with official figures suggesting use has quadrupled amongst 16-24 year-olds in the past two years (Times 19.08.2017), a trend that follows longitudinal findings by other researchers, which suggest an increasing prevalence of use over the past decade (Simmonds and Coomber 2009; Kimergård and McVeigh 2014; Bates and McVeigh 2016; McVeigh and Begley 2016). Fuelling much of this growth appears to be the emergence of use amongst sectors of the population not previously associated with PIED use, who are seeking to build their bodies for image-conscious reasons, with Bates and McVeigh’s (2016) longitudinal survey of PIED users finding that some 71 percent did so primarily “to gain muscle” or “lose fat”, with only 18 percent giving a sport-focussed goal, such as increasing strength, speed or endurance, as their primary motivation for use¹ (p.4).

Whilst ‘bodybuilding’ has been a popular activity since the 1980s (Monaghan 2001; Hotten 2004; Assael 2007), the arrival of social media appears to have created a new, emergent culture of image-specific use (Bleeker 2014), including the Instagram and Facebook-oriented “workout culture” (Olesker 2015), and its more nightclub and party-oriented “lad culture” subset (Martin 2014), suggesting the rationale and motivation for use of PIEDs has broadened beyond bodybuilding’s ‘dedicated’ form of aesthetic training to an hedonistic realm, where muscle bulk and tone are seen as an important style accessory, and a key feature of identity for many young men.

Accompanying this shift in use, there has been a change in the culture of use, and the manner in which PIED users ‘learn’ to use, with ‘sport-oriented’ or ‘competitive’ individuals distinct in their ‘ethnopharmacologies’ (Monaghan 2001) to these newly-emergent ‘image-oriented’ and ‘hedonic’ user cultures. These divisions and categorisations shall form an integral part of the framework for this thesis, which shall further seek to address whether the increasing use observed by others (Bates and McVeigh 2016), indicates a ‘normalisation’ (Parker *et al.* 1998) of PIED use is occurring amongst groups not

previously associated with such use, and what consequences this could present.

The Purpose and Structure of this Study

This research aims to address some key questions arising from the apparent, shifting landscape of drug use within gym-going subcultures:

First, this thesis aims to explore whether or not the use of performance and image enhancing drugs is becoming ‘normalised’, following the framework of Parker *et al.* (1998), regarding the normalisation of ‘recreational’ drugs, such as cannabis, and MDMA.

Second, the research aims to explore the context of this drug use, and how the use of PIEDs varies across the diverse subcultures that inhabit gym spaces. This exploration shall be made with reference to several ‘categories’ of drug user, documented in the course of this ethnography by means of a ‘grounded theory’ methodological approach to the identification of apparent categories and properties (Glaser and Strauss 1967), which will greatly enhance understanding of the cultural environment in which use takes place.

Third, the research aims to explore how the use of PIEDs is shifting with the numerous changes in lifestyle brought about by modernity, including the impact the internet and social media are having on drug use within gym-going subcultures, and how attitudes towards, and use of these drugs have changed since ‘the gym’ first became a focus of research for sociologists (e.g. Klein 1993; Evans 1997; Monaghan 2001).

Lastly, the research shall aim to explore the representation of PIEDs, and users, with particular reference to perceptions of stigmatisation by normative culture (Goffman 1963), which might impact the extent to which these drugs are becoming truly ‘normalised’ (i.e. culturally accepted (Parker *et al.* 1998)).

These questions will all be addressed with reference to relevant context regarding harm minimisation policies, and youth and subcultural theories, relevant to such ethnographic research into drug using subcultures. The questions shall be explored through an in-depth, qualitative analysis that uses the voice of participants in the various gym-going subcultures as part of its analytical method, and aims to give ‘thick description’ (Geertz 1973) of the cultural context through which these questions may be best understood.

Reflecting these research questions, this thesis shall therefore divide users into differing categories, of ‘sport-focussed’ and ‘image-focussed’ PIED users, in order to investigate the distinctive characteristics of each of these groups, with those ‘image-focussed’ users further sub-divided into ‘hedonic’² and ‘non-hedonic’ cultures of use, the latter being those individuals who train to overcome insecurities, or look intimidating or impressive for employment-related purposes (such as Doormen (Monaghan 2002*i*)), whilst

the former encompass those members of the social media-oriented ‘workout culture’, and night-time economy-oriented ‘lad culture’, who use PIEDs to acquire an impressive physique for the purposes of attracting partners, ‘showing off’ for social media approval, or appearing intimidating to other males in nightclubs, and similar venues (Olesker 2015; Bleeker 2014; Martin 2014).

This categorisation, the value of which shall be addressed in the course of the thesis, shall then be used in the analysis of the above questions, to address the extent to which PIEDs are becoming ‘normalised’ within increasingly ‘mainstream’ youth cultures (Parker *et al.* 1998), how use is changing in the context of these categories, and also what this means for future policy recommendations, and harm-minimisation.

As such, chapter one of this thesis shall begin with a brief historical background to the use of both performance, and image-enhancing drugs, which shall provide context for the discussions to follow. This shall be followed by an overview and brief discussion of some of the relevant literature on masculinities and youth, which shall help to frame the findings of this research.

Chapter two forms the methods chapter of the thesis, detailing the methodology employed in assembling this work, and discussing the ontological and epistemological underpinnings to the research, in addition to the actual methods of data collection and analysis employed. This chapter shall further feature discussion of limitations to the research, including areas of ‘hidden ethnography’ (Blackman 2007), before proceeding to the first data chapter.

Chapter three shall seek to apply the ‘normalisation’ framework offered by Parker *et al.* (1998) to the research findings, with the aim of establishing whether PIEDs are becoming ‘normalised’, when judged against the standards used to measure normalisation of illicit ‘recreational’ drugs. This chapter shall address the prevalence of ‘access and opportunity’, ‘use by adolescents’, ‘regular and recent use’, ‘social acceptance’, and finally ‘cultural acceptance’ of PIEDs, and shall catalogue the ways in which the perceptions of PIED users surveyed appear to satisfy these requirements, thus evidencing normalisation.

Chapter four shall then explore the motivations for use of the identified, divergent ‘sport-oriented’ and ‘image-oriented’ user categories, and shall show how users and subcultural groups can largely be categorised along ‘sport’ vs ‘image’ lines, with ‘hedonic’ users even more distinct from the classic ‘sport-oriented’ user than other ‘image-focussed’ trainers, thus suggesting a need to further divide image-focussed use along ‘hedonic’, and ‘non-hedonic’ lines for research and policy purposes. This division offers a valuable framework through which use can be understood on a level between the ‘micro’ individual or youth cultural group, and the ‘macro’ societal view. This framework shall be applied in evaluating patterns of use, as well as evidencing the thesis of ‘normalisation’.

Chapter four shall discuss first the influences on the decision to begin using of ‘sport-oriented’ individuals, such as a desire to be competitive in one’s sport, the influence of peers and environment, and benefits to repair and recovery, and shall then progress to discuss the motivations of broadly ‘image-focussed’ users, including overcoming insecurities, peer influence, or financial motivations. This shall lead in to discussion of

the motivations of ‘hedonic’ image-oriented users, such as appearing sexually desirable, or intimidating to other males, as well as identity formation, and ‘fitting in’ with an identifiable youth cultural group. The chapter shall finally discuss some of the other types of user encountered in the course of this research, who upon examination it shall become clear can also broadly be assigned to the major categories identified in the research framework.

Building upon this, chapter five shall explore the ways in which users belonging to these distinct categories learnt to use PIEDs, and shall frame this discussion in the context of the social theories of learning identified by subcultural and control theorists. This discussion shall encompass both ‘independent’ learning, and social forms of subcultural learning, again analysing the differences between the identified classes of user, and how this affects the accumulation of diverse ethnopharmacologies, as well as perceptions of ‘normalisation’.

Chapter six shall then analyse features of the longer-term use of PIEDs, investigating the means by which users sought to avoid harms associated with use, and cataloguing attitudes towards such harms, and how these vary by user category. This chapter will suggest that the ‘image-focussed’, and especially ‘hedonic’ user groups are in need of harm-minimisation information, and will use examples of incidences of harm uncovered during data collection to evidence this assertion.

Finally, chapter seven shall discuss the extent to which PIED users are ‘stigmatised’ by normative culture, with particular regard to the concept of “roid rage”, which shall be followed by a discussion of polydrug use amongst PIED users. This chapter addresses the single significant argument identified against the thesis of ‘normalisation’, that of resistance to broader ‘cultural acceptance’ of PIEDs, and analyses how perceptions of ‘stigmatisation’ are evolving with the changing user demographic, and increasing diffusion of information to the mainstream culture, through means discussed by Parker *et al.* (1998).

The final chapter shall provide a summary of the outcomes of this exploration, its contributions to knowledge in this field, limitations to the work, and recommendations of how this research could be developed in future. Bibliography, glossary, and notes shall follow.

Whilst chapter one shall present some of the key literature relating to the background and context of PIED use, literature shall be introduced throughout the course of the thesis, either at the beginning of the chapter to which it is relevant, or in the body of the main textual analysis. It is recommended the reader refer to the *dramatis personae* and glossary as necessary.

1 An Historical Overview of the Use and Control of Performance and Image Enhancing Drugs, and Youth Masculinities

Blackman (2004) suggests “a weakness of drug normalization theory has been its focus on the contemporary, where it lacks a historical context to understand drugs in society” (p.127), and such a sentiment that patterns of drug use must be understood with reference to appropriate historical context has been voiced by a number of academics (Barton 2011; Coomber 2006*i*;2013). To fully frame the coming discussion of patterns of performance and image enhancing drug (PIED) use amongst different youth cultural groups, in particular with regards to the thesis of ‘normalisation’ (Parker *et al.* 1998), this chapter shall therefore give a brief overview of the historical context of PIED use, first in the realm of performance-enhancement, primarily for sporting purposes, before moving on to discuss the historical context of pharmacological image-enhancement.

Once the historical context of the use of these drugs has been summarised, the chapter shall then introduce some of the relevant literature on masculinities, through which such drug use may be better understood. These three areas shall provide the underpinnings of the data chapters to come, and it is hoped that providing this context here will better allow the reader to situate, thus more fully understand, the findings presented by this research.

A History of Performance-Enhancing Drug Use and Control in Sport

PIEDs have a long history, dating back to the Olympic games of ancient Greece, and the gladiatorial battles of the Roman colosseum (Voy 1991). In these famed events, alcohol, strychnine, and psychedelic mushrooms were all utilised to enhance competitors’ strength, endurance, or courage (Voy 1991), and many civilisations since have employed such enhancement, on the field of battle (Wernick 1979; Nutt 2012), in ritual hunting (Erspamer *et al.* 1993), or as a means of performing hard physical labour for prolonged periods in harsh climates (Schweitzer 1952).

In modern times, PIEDs are most frequently associated with performance-enhancement in sporting events, with the first recorded use of PIEDs in this context occurring in 1807, when a participant in an *endurance walk* used the opium-containing tincture *Laudanum* to increase his endurance, thereby winning the race (Mondenard 2000). Although in modern times *doping* is highly criticised (Walsh 2007; Moore

2012), until the mid-20th century there was an assumption that utilizing compounds to improve one's performance was simply "part and parcel of the general seeking of sporting advantages in whatever way possible"³ (Coomber 1999:104), and in the context of the largely *laissez-faire* attitude towards drugs prevailing more broadly at this time (Barton 2011; Berridge 1989; Blackman 2004), such doping created little controversy. By the 1880s, cyclists competing in 'six day races' were utilizing all manner of PIEDs, with brandy and strychnine, as well as cocaine and heroin being popular mixes, alongside caffeine tablets, or ether, all for the purposes of improving athletes' pain-tolerance and endurance (Voy 1991; Verokken 2005; Donohue and Johnson 1986).

Despite the introduction of the first laws controlling such substances as cocaine and opium during this period⁴, use of performance-enhancers in sport continued unresisted into the mid-twentieth century, with growing popular concern over drug use in everyday life (Mott and Bean 1998) not mirrored in the sporting world at this time (Waddington 2000). By 1959, following the 1935 creation of synthetic testosterone (David *et al.* 1935), the "currency in which other performance-enhancing substances are measured" (Hoberman 2006:30), the very first drug developed solely for the purpose of enhancing the performance of sportsmen was developed, in the form of John Bosley Ziegler's 1959 synthesizing of *methandrostenolone* ('DBol'), in response to the USSR's administering of testosterone to their weightlifting team, a propaganda effort intended to demonstrate Soviet superiority to the world (Guttman 1992; Assael 2007). This set off the "chemical arms race" between the two 'superpowers' (Voy 1991; Waddington 2000; Assael 2007), and from this point *doping* became increasing associated with these testosterone-derived compounds: the anabolic-androgenic steroids (hereafter "steroids") (Hoberman 2006; Assael 2007).

By the time the first regulations against *doping* in a sporting context were introduced, following the death of British cyclist Tommy Stimson in the 1967 *Tour de France*, which itself followed the death of cyclist Knud Jensen at the 1960 summer Olympics, both ostensibly due to their use of amphetamine (Donohoe and Johnson 1986; c.f. Hoberman 2006), a drug which became increasingly popular in the post-war period (Nutt 2012; Coakley and Hughes 1994; Verokken 2005), increasing concern was aired for the 'safety' of athletes, with bodies such as the *International Federation of Sports Medicine* lobbying for controls on certain 'harmful' PIEDs (Coomber 1999; Donohoe and Johnson 1986; Mottram 2010). This concern over amphetamine-related deaths and "near misses" in sport came at the time Britain's youth subculture of *Mods* became associated with the use of amphetamine-containing '*purple hearts*', leading to the infamous "moral panic" explored by Cohen (1972), and the introduction of the 1964 Drugs (Prevention of Misuse) Act, an example of how social fear of drugs in the non-sporting world may have influenced the creation of doping policy in the sporting world (Coomber 2013).

In the following decades, as both the sporting world (Verokken 2005; Coomber 1993;2013), and society more broadly became increasingly prohibitionist towards drug use (Barton 2011), it was clear that use of PIEDs, particularly steroids, was truly endemic in sport. Todd (1987) notes that by 1968, an estimated one third of the US track and field team had used steroids at the pre-Olympic training camp, and Waddington

(2000) documents the spread of PIED use from throwing events, wherein size would be a distinct advantage, in the 1970s, to being present in almost every track and field event by the time testing procedures were operational in the mid-1980s (see also Verokken 2005), whilst others noted a trend towards athletes competing at lower levels, including amateur and even highschool leagues, beginning to use anabolics to enhance performance at this time (Voy 1991; Williamson 1993).

The story of PIED use in sport after this period is mixed, with methods of prohibition growing ever harsher (Waddington 2000), yet cases such as the 1988 summer Olympics 100m controversy (Dubin 1990; Houlihan 1999; Moore 2012) and the 2012 revelation of cyclist Lance Armstrong's long history of doping (USADA 2012; see also Walsh 2007) clearly demonstrating such policies were ineffective at preventing use. Although academics suggested a shift towards a harm-reduction focus (Coomber 1996), and indeed the *Union Cycliste Internationale* adopted this philosophy, introducing haematocrit tests over conventional testing procedures to monitor riders not for erythropoietin ('epo') use, but instead signs of over-use, to the level harm was liable to be caused through the blood-thickening associated with excessive use (Walsh 2007; Waddington 2000), this endeavour ended when the newly-created, strongly-prohibitionist World Anti-Doping Agency (WADA) took over responsibility for testing in cycling events (Waddington 2000; Armstrong and Reilly 2005; USADA 2012).

Combined with a public backlash against athlete 'cheats' that accelerated from 1988 onwards (Dubin 1990; Moore 2012), doping controls in sport have in modern times become so commonplace, and those who infringe these rules so publicly vilified (for example Telegraph 22.04.2015), that one could be forgiven for thinking prevalence of use had decreased under the prohibitionist system, although the numerous cases of high-profile athletes testing positive each year (USADA 2012; BBC Sport 15.07.2013; 07.04.2017; Guardian 24.04.2015) are indicative of a culture of performance-enhancement remaining ingrained in many sports.

Some sporting events and organisations have avoided coming under the prohibitionist WADA testing protocols, however, and in these sports performance-enhancement is often accepted (Wertheim 2009; Bell 2008i), just as Coomber (1999) noted to have been the case historically, in spite of the generally prevailing anti-PIED attitude of the public with regards to 'cheating' in Olympic sports (Moore 2012). The *Ultimate Fighting Championship* (UFC), for example, is an increasingly mainstream sporting event, which recently sold for four billion US Dollars (Telegraph 11.07.2016), indicating its popularity. The organisation's 100th event, held in 2009, drew some 1.6 Million 'pay-per-view' buys, and featured the obviously drug-fuelled Brock Lesnar (Guardian 16.07.2016; FloCombat.com 11.08.2016) taking the heavyweight championship belt, whilst the testosterone-using Dan Henderson (MMAJunkie.com 01.10.2015) knocked out future middleweight champion Michael Bisping further down the card, to little complaint from observers (Sherdog.com 11.01.2010)⁵. Whilst the UFC began to implement WADA-style out-of-competition drug testing in 2014 (MMAFighting.com 10.06.2014), indicating a shift that brought it more in-line with other regulated sports, some have suggested the minor punishments adopted have not discouraged the culture of use in the sport (Bloodyelbow.com 13.02.2015), and numerous 'mixed martial arts' (MMA) promotions exist

that still allow the use of PIEDs, often to the approval of audiences and commenters, offering an ‘untested’ alternative to the UFC for fighters wishing to use PIEDs (FloCombat.com 19.09.2016; Rogan 2017*i*; MMAFighting.com 30.03.2017).

Although none are so popular as the UFC, numerous other sporting events are strongly associated with PIED use in 2017, with competitors in various ‘strongman’ competitions, powerlifting federations and other events almost unanimously openly utilizing PIEDs to help them achieve the results they attain (Bell 2008*i*). This study shall cite a number of competitors from such sports, and catalogue their beliefs, attitudes, and behaviours in relation to performance-enhancing drugs. However, if there is one sport that is absolutely synonymous in the minds of the public with PIED use, it is the sport of bodybuilding, an activity in which competitors attempt to sculpt the most impressive-looking body, to be judged on their appearance (Monaghan 2001; Fussel 1991; Hotten 2004). This activity ties in with another phenomenon worth exploring, to provide necessary context before an analysis of present day beliefs and behaviours can begin: the use of enhancement drugs for the purposes of ‘image’.

Image-Enhancement and the Normalisation of Drug Use

Whilst PIEDs are often thought synonymous with sporting activity, this overlooks the history of such compounds as aids employed for *image* enhancement. As early as 1908, a ‘reducing remedy’ for fat loss named *Marmola* was on common sale, accompanied by advertising campaigns designed to prey on young women’s insecurities (Evans-Brown *et al.* 2012), a tactic that would become increasingly common in marketing campaigns in the proceeding century (Pope *et al.* 2000; Blackman 2004).

Such use and marketing of drugs for fat loss continued through the 1930s, when the drug 2,4 *dinitrophenol*, or ‘DNP’, came on to the market, backed by a similar advertising campaign (Evans-Brown *et al.* 2012). Contemporary reports suggest some 100,000 people sought ‘treatment’ with DNP in 1933 alone (Tainter *et al.* 1934), demonstrating the market for image-enhancers at that time. Such fat-loss-oriented image-enhancement has continued, with numerous drugs being marketed as ‘fat loss miracles’ since (Evans-Brown *et al.* 2012).

The present research deals primarily with a different type of enhancement, however, utilised by young men with the intention of building muscle, which largely traces its roots to both bodybuilding, and the silver-screen trend towards muscled stars in the latter part of the 20th Century (Pope *et al.* 2000*i*).

Bodybuilding first saw widespread popularity in the 1950s with the famous *Charles Atlas* program, which brought bodybuilding into the homes of 70,000 people a year, at a time when the first truly organised contests in the sport were taking place (Hotten 2004). Although Atlas is not believed to have used PIEDs

(Pope *et al.* 2000*i*:37), the sport rapidly transformed with the creation of anabolic-androgenic steroids such as 'Dianabol' (above), and by the time the Weider brothers' *International Federation of Body-Building and Fitness* (IFBB) received recognition from the General Association of International Sports Federations in 1971, it was clear that everyone wishing to be competitive in the sport was on *something* (Assael 2007; Hotten 2004).

1977 marked a crucial change in the public image of bodybuilding, with the release of the critically successful '*Pumping Iron*', the film that made Arnold Schwarzenegger a household name. After that, bodybuilding was "in" (Fussel 1991; Assael 2007), and soon these larger-than-life men began to dominate the television screens of American and European viewers alike, in the form of Schwarzenegger's turns in *Predator*, and the *Terminator* franchise, Lou Ferrigno's run as *The Incredible Hulk*, and Sylvester Stallone's *Rocky* and *Rambo* films. As this obsession with muscle-bound action stars climbed steadily through the 1980s, audiences were simultaneously bombarded with images of the new generation of professional wrestler, belonging to Vince McMahon's *World Wrestling Federation*, who shared the bodybuilders' size, and proclivity for steroid use (Assael and Mooneyham 2004). As *muscle* grew in popularity, the use of the substances that granted these supermen their physiques became ever more common, even if remaining somewhat socially stigmatised (Hotten 2004; Fussel 1991), and Pope *et al.* (2000*i*) point to this shifting perception of how the male body 'should' look as responsible for an 'identity crisis' amongst many young men of the period, leading them to use steroids in order to attain the 'masculine' physiques depicted in the popular media (Pope *et al.* 2000*i*).

This marks the first period in which a culture of PIED use began moving towards *normalisation* (Parker *et al.* 1998;2002) outside of competitive sporting endeavours, even if only in the form of the *results* of use, with bodybuilding magazines (which hinted at PIED use 'between the lines' (Hotten 2004)) dominating newsagents' shelves, and gyms springing up all over the world at this time (Assael 2007; Fussel 1991). With the public backlash against the drugs scandal at the 1988 Seoul Olympics (Moore 2012), and sports journalists starting to turn their attention away from football hooliganism, and towards the newly termed "roid rage" at this time however (Coomber 1999;2013; Monaghan 2001; Gardiner *et al.* 2011), bodybuilding retreated into the shadows, and image-oriented steroid use largely faded from sight, beyond the boundaries of 'hardcore' using subcultures, once more (Monaghan 2001;2002*ii*).

At this precise moment when bodybuilding was becoming 'demonised' (Monaghan 2001;2002*ii*), however, former Olympic sprinter (and steroid-user) David Jenkins in 1993 manufactured his first protein powders, supplements which have sold phenomenally well ever since (Cram 2008), transforming performance-enhancement as an industry forever (Assael 2007). Jenkins' business grew, adding ever more lines of supplements as others latched on to his idea of marketing muscle-enhancing supplements to the general public (Assael 2007; Hotten 2004). In 2017, the majority of supermarkets, in addition to specialist retailers, commonly stock protein bars and drinks, with protein supplementation frequently advertised on television, and other media. Enhancement with legal, or rather 'non-banned' products, has thus become 'normalised'.

Simultaneously, soft drink developers were building on the long-established formula of ‘tonic drinks’ such as *Lucozade* and *Coca Cola*, and bringing *sports energy drinks* to market, normalising the use of stimulants, and general ‘enhancers’ amongst the new generation of sporting youths, who were led to believe by advertising campaigns that such enhancement was not only *normal*, but often times *necessary* (Miller 2008). As with protein supplements, advertisements for energy drinks are unavoidable in 2017, with many athletes and other stars endorsing them in various media, thus ‘sanctioning the legitimacy’ of the use of such drugs (see Blackman 2004).

With the use of legal performance-enhancing substances at an all-time high, it seems hardly surprising that illicit enhancement would naturally see a return, and with a rise in the use of social media in recent years, a new phenomenon has been documented by researchers of young people obsessively training in order to ‘fit in’ with a new body-obsessed ‘workout culture’, in which individuals strive to do all they can to receive “likes” and “shares” for images posted of themselves in the gym, or posing in minimal clothing (Bleeker 2014). With this drive towards body-obsession amongst the young coming in conjunction with a ‘normalisation’ of licit supplementation, a trend towards PIED use of the kind seen in the 1980s amongst bodybuilders has re-emerged, only this time on a seemingly grander scale. As Kimergård & McVeigh (2014) note, steroid users are now the principal group attending needle and syringe programs (NSP) in Britain, suggesting a significant growth of use in recent years.

With this context in mind, this thesis therefore considers whether this apparently growing population of image-focussed users has a distinct ethnopharmacology (Monaghan 2001) from the competitive, sport-oriented cultures with which PIEDs have long been associated, and whether or not the use of PIEDs more generally is becoming increasingly ‘normalised’ (Parker *et al.* 1998) in modern society. These two questions shall form the core basis and framework of the coming exploration.

Masculinities and Youth Literature

In order to fully appreciate the coming discussion of PIED use and normalisation, it is further necessary to frame these discussions of drug use and body image in the context of feminist literature on masculinities, since the use of these drugs is so intimately connected with conceptions of masculinity (Klein 1993; Pope *et al.* 2000; Monaghan 2001), as the data in the coming chapters – particularly chapter four – will show. This section shall therefore give an outline of some of the key literature relating to the construction and performance of masculinities, and illustrate how these tie in with the conceptions of masculinity and femininities on display in gym environments. This will further be related to some key texts on youth and young identities, to which this thesis shall return further in the main data chapters.

Some of the most cited works on the construction, enforcement and embodiment of masculinities are those of Raewyn⁶ Connell (see Wedgwood 2009), and an understanding of the significance of Connell's work will help to frame some of the coming discussions relating to the subcultures found in gym environments. Coming from a feminist epistemological perspective, Connell's (1995) work provides critical analysis of 'historically specific masculinities', and explores the relation between these, and the roles men play in "the reproduction of dominant forms of masculinity" (Wedgwood 2009:330; Connell 1995). Whilst Connell (1995) is careful to document the importance of class structures in the formation of masculinities, building on her earlier work (Connell 1983; Carrigan *et al.* 1985), and reflected in other contemporaneous explorations of masculinities (Mac an Ghaill 1994), Connell's cultural critique of the social organisation of masculinity, and masculine hegemony as cultural opposition to femininity, was nonetheless significant in giving a 'post-structural' method for exploring gender relations (Wedgwood 2009), and cementing the theoretical underpinnings of 'hegemonic masculinity' (Carrigan *et al.* 1985; Connell 1995).

Through exploring both the 'dynamic unconscious', and the relationship between generations, Connell describes how "the adult personality is formed by pressures to conform with society" (in Wedgwood 2009: 334), which leads to reproduction of 'dominant' forms of masculinity by individual men (Connell 1995). In discussing the influence of masculinities and gender identity on users of performance and image enhancing drugs, this is most clearly observed in the phenomenon of 'embodiment', or how the construction and maintenance of body is intimately linked to the construction of masculinities, and social power structures (Connell 1983; 1995; Klein 1993). In *Masculinities* (1995), Connell notes the "two-way and simultaneous" relationship between the body and the social, and how "practice itself forms and is formed by the structures within which bodies are appropriated and defined" (Connell 1995: 61), using the theory of 'cathexis' to illustrate how "the social relations of gender are experienced in the body (as sexual arousals and turn-offs, as muscular tensions and posture, as comfort and discomfort) and are themselves constituted in bodily action (in sexuality, in sport, in labour, etc.)" (Connell 1995:231; Wedgwood 2009:336), with the body thus forming an "object of practice" (Carrigan *et al.* 1985).

Giddens (1991) elaborates on this principle through analysis of the 'reflexive' body, noting the body is responsive to socioeconomic and cultural stimuli (p.77), thus susceptible to the same globalising and modernising forces that alter conceptions of masculinity over time (see Mac an Ghaill 1994: 13). This focus on the male body, and its relation to social and power structures, forms the central theme of Klein's (1993) ethnography of gender construction within bodybuilding subculture. Klein formulated the term 'comic book masculinity' (p.234) to describe the bodybuilder's position on "the continuum of modern masculinity" (p.332), a form of masculinity that was reactionary, in both the literal and political sense (p.222-226), and linked to a "masculinity in crisis", stemming from deindustrialisation (p.6). Monaghan (2001), writing on the subject in relation to the working-class bodybuilders of the Welsh valleys, offers a more sympathetic interpretation of the culture than Klein (1993), bringing critical analysis to this prior ethnography (pp.8-12), and suggesting that masculinities must be understood as more culturally-variable than Klein's analysis posits.

Monaghan and Atkinson (2014) build on this work through their examination of ‘physical cultures’, which they note are often diverse, and represent varying and at times conflicting conceptions of ‘masculinity’, as Monaghan (2001) noted in relation to the difference between the well-muscled forms most popular in ‘consumer culture’ (e.g. advertising) when compared to the more physically extreme bodybuilders of the 1990s, such as Dorian Yates. Whilst Connell (1995) explored varying masculinities as part of her research methodology, during the intervening years “the concept of hegemonic masculinity has been over-utilised, or rather, overemphasised... misunderstood... as being reproduced unproblematically and inevitably” (Wedgwood 2009:34), a misconception explored by Anderson (2009) as the “changing nature of masculinities”. Anderson (2009), similar to Monaghan and Atkinson (2014), notes the diversity in masculinities on the ‘continuum’ (Klein 1993) of masculine conceptions, and notes the emergence of an ‘inclusive masculinity’, with features and ideals counter to those of what is commonly conceived as ‘hegemonic’ masculinity (see also Anderson and McCormack 2016).

Since Connell (1995) selected for her ‘life histories’ men “for whom the construction or integration of masculinity was under pressure” (Connell 1995:90), and documents “the significance of differences among masculinities” (p.35), Anderson’s (2009) focus on college athletes, cheerleaders and fraternity members, particularly gay participants in these groups, serves to ‘update’ Connell’s explorations of masculinities, and modern works on ‘masculine’ subcultures and archetypes frequently reflect the temporal and cultural shift in what is taken to be ‘masculine’ (e.g. Bridel and Rail 2007; Anderson and McCormack 2016). Thus whilst the “heavily convention-bound” historical masculinities of sport, particularly in relation to national competition, where male violence is both celebrated, and subservient to authority (Connell 1995:30; Gruneau and Whitsmon 1993), can still be observed, ‘alternative’ conceptions of masculinities must also be acknowledged. Whilst ‘gay masculinities’ (Mac an Ghaill 1994; Bridel and Rail 2007; Anderson 2009) serve as one example of a ‘non-hegemonic’ form of masculinity, there exist masculine conceptions that are diverse, yet still maintain the “relations of alliance, dominance and subordination” of which Connell (1995:37) spoke. Whilst Klein’s ‘comic book masculinity’ (1993) differs from Willis’s (1977) “lads”, or the “Essex man” (Mac an Ghaill 1994:32), and is in some respects oppositional to these conceptions, all can nonetheless be understood as occupying positions on a ‘spectrum’ of ‘allied’ masculinities (Klein 1993; Connell 1995) that reproduces and reinforces certain socio-cultural features, particularly in relation to dominance and conformity.

This can be tied to the works of the philosopher Judith Butler, whose ‘Gender Trouble’ (1990) helped to resituate the understanding of gender within class, ethnicity and sexuality, through which different manifestations of gender performance may arise (Butler 1990). Butler’s ‘Undoing Gender’ (2004) identifies the mechanisms present in society that reinforce gender ‘norms’, and the formation of structured identities these may produce, thus echoing and updating Connell’s findings (1995). Whilst noting how state policy and medical institutions can impact what is deemed ‘normal’, drawing on Foucault (1961), Butler (2004) further highlights the manner in which identities are formed by societal discourse, and again we see the theme of aggressive masculinity arising as a reaction to fears of homosexuality, or what Anderson (2009) terms

'homohysteria'. Although bodybuilding itself has been popular within the gay community for some time (Haggerty 2000), Butler (2004) discusses how gender identities are constructed around gestures and speech acts, and notes the connection between language, the body, and identity, returning us to the social construction of variable masculinities (Anderson 2009), of which some may be more 'hegemonic', or 'historically dominant' than others. Language choices are thus important in analysing conceptions of 'masculinity' and femininity, and throughout this thesis the specific language used by groups will illustrate their particular subcultural perceptions and interpretations (see next chapter).

It can therefore be said that masculinities are to some extent fluid or socially alterable (Anderson 2009), based upon the "geography of masculinities" (Connell and Messerschmidt 2005) presented by differing regions, cultures and class structures (Butler 1990; Mac an Ghaill 1994; Nayak and Kehily 2008; Monaghan and Atkinson 2014), but that historically dominant, 'hegemonic' forms (Connell 1995) continue to persist, and impact and regulate social relations. This understanding is articulated by Nayak and Kehily (2008:51) through the suggestion that contemporary gender relations can be seen as "a site of fissure with the past whilst simultaneously holding onto many features of continuity". It is in this context, therefore, that the findings in the coming chapters can be understood, giving the reader deeper insight into the separation, and connections, between the identified user categories that shall become apparent in the course of this thesis.

Situating the Present Research

As described above, focus on the body as both a symbol and extension of masculinity within society has progressed primarily through two different routes, the 'sport-focussed' enhancement, which embodies a more 'orthodox' conception of masculinity (Connell 1995; Gruneau and Whitson 1993), and the 'aesthetic', which encompasses various 'image-focussed' forms of enhancement, and can equally be 'historically dominant' (Klein 1993), 'inclusive' (Anderson 2009; Anderson and McCormack 2016), or otherwise (Monaghan and Atkins 2014). Whilst these are not mutually exclusive positions, the subcultures which sit on this 'continuum' of masculine ideals can be located as striving for, and reinforcing diverse and competing 'archetypes' of masculinity (Monaghan and Atkins 2014; Anderson and McCormack 2016), which influence their broader subcultural behaviours, and position vis-a-vis social power structures.

The methodology which led to the categories and properties of the present research being identified shall be explored in the following chapter, however it is clear that subcultural attitudes towards drug use are to some extent influenced by subcultural archetypes of masculinity, or 'subjective identities' (Mac an Ghaill 1994:9). Sport-oriented PIED users are influenced by a historically-dominant masculine 'ideal' that is oriented around strength, capability, and obedience to rules and order (Connell 1995:30), which is reflected in

their subcultural behaviours, whether in the form of their training and drug use, or their criticism of “cheats” and “abusers” (see chapter four). Image-focussed users, meanwhile, may train to embody an historical ‘ideal’, as with Klein’s (1993) bodybuilders, or may train out of fears of weakness, or a desire for a certain ‘masculine’ competence (Monaghan 2001;2002i; Monaghan and Atkinson 2014), which are likely to reflect, in a subordinate manner, many of these dominant narratives, even if differing from the archetype of the sportsman.

One archetype of masculinity observed in gym-going subcultures that is distinct, however, is the ‘hedonic’ ideal most clearly embodied by members of ‘lad culture’ (see Martin 2014). Although the term ‘hedonic’ can be applied to a broader set of trainers whose conception of masculinity is heavily influenced by sex, and a ‘showy’ appearance (e.g. Olesker 2015), members of ‘lad culture’ embody a particular working-class manifestation of overt ‘masculinity’, and although Mac an Ghaill (1993:13) notes how “working-class masculinities” have been particularly subject to alteration, owing to “changing family networks, restructured local labour markets, changing sexual patterns of consumption, peer and leisure group practices, and media representations” the middle classes are not necessarily so significantly affected by, it is appropriate that this ‘new’ conception of aggressive and showy masculinity shares its name with Willis’ (1977) oppositional, working-class youths in *Learning to Labour*, being similarly oppositional, and revolting against bourgeois values, but nonetheless conforming in their own way: in this case through materialism (see Blackman 2004).

‘Hedonic’ gym trainers have a conception of masculinity that embodies some elements of Anderson’s (2009; Anderson and McCormack 2016) ‘new’ masculinities, such as strict attention to appearance, and intimate homosocial bonding without fear of suggestions of homosexuality, in contrast to more ‘orthodox’ groups such as sportsmen (Connell 1995). However, the role of binge-drinking, material consumption, and aggressive pursuit of sexual dominance, as chapter four shall discuss, puts them in a position distinct from ‘inclusive’ masculinities, in particular with regards to the subordination of women by this subculture, who are perceived as the “living dolls” of Walter’s (2011) critique: valued as a measure of how “alpha” a male is in the number of women he is able to sexually dominate, but treated as accessories for men to “show off”, and certainly not equals (see chapter four). The influence of a shifting, and highly sexualised culture (Gill 2011) is also reflected in what Olesker (2015) notes is the influence of pornography on members of ‘hedonic’ gym-going subculture, with bodily ideals amongst this group in part influenced by those of porn stars, again suggesting an ideal of ‘masculinity’ distinct from orthodox conceptions, but still maintaining hegemony in its attitude towards women.

The cultural environment of ‘the gym’ reflects the differing position of women within ‘hedonic’ gym-going subcultures, with those young women in ‘commercial’ gyms encouraged to ‘show off’ their appearance as much as possible, and “advertise” to the men present, as Walter’s (2011) subjects were encouraged, something which is absent in the more ‘hardcore’ gyms, in which women might be perceived as ‘subordinate’ to some extent (e.g. men will “advise” women on how they ‘should’ train without prompting), but not in the

same “accessory” manner. Undoubtedly media has played a role in this encouragement to female subordination, and depiction of overt sexuality or ‘porno chic’ as the highest of aspirations for young women (Gill 2011; Walter 2011), and following Gill’s (2011) suggestion that “it’s time to get angry again”, themes of the position of sex and dominance within ‘hedonic’ cultures, and in particular ‘lad culture’, will be explored critically in the course of this thesis. It is worth noting, however, that exaggerated working-class masculinities such as ‘lad culture’ must be understood as reactions to structural forces, and so in critiquing these behaviours, one must not lose sight of the fact that these are often bright, and as the data chapters shall show, hard-working young men, who are simply seeking belonging and identity in the modern globalised consumer culture (Blackman 1995;2005).

Such excessive, working-class masculinities have of course been witnessed to varying extents across geographies and history, whether in the form of Willis’ (1977) ‘lads’, Herzfeld’s (1985) Cretan mountain villagers, or Kessler *et al.*’s (1982) ‘Ockers’ (see Wedgwood 2009), with ‘lad culture’ by no means being a unique manifestation of masculine hegemony, but simply one that is temporally relevant. The blend of conformity with consumerist culture, and simultaneous rebellion against class structures apparent in this subculture, distinguishes ‘lad culture’ from its more middle-class, ‘workout culture’ equivalent (which is largely indistinguishable from the media-encouraged images of Monaghan (2001) and Pope *et al.* (2000)), although both will here be explored through analysis of their ‘hedonic’ use of image-enhancing drugs.

Finally, it is necessary to recognise the “geography of masculinities” which emphasises the interplay amongst local, regional and global levels (Connell and Messerschmidt 2005). As such, the present research should not be considered ‘generalisable’ to masculinities everywhere, but reflects only a particular ‘British’ interpretation of masculinities in gym-going subcultures, which although influenced by some of the media and cultural reference points already discussed (Mac an Ghaill 1994; Gill 2011; Walter 2011), reflects only the particular social environment of gyms in the south-Devon area, which is rural and largely post-industrial working-class. Whilst similar subcultures might be observed elsewhere (e.g. Underwood 2017), the personalities and bodies explored in this research are “anchored in their own worlds/historical contexts” (Wedgwood 2009:334), and are largely white, male, British, and (skilled) working-class (see *dramatis personae*). Whilst the primary focus throughout the thesis will be subcultural behaviours as relate specifically to drug consumption, this background on masculinities will help inform how and why some of these behaviours vary across user subcultures and categories, and will thus help to contextualise the coming analyses more completely.

With this background in mind, therefore, this thesis shall now turn to the methodology employed in this research, before continuing to the primary data chapters.

2 Research Methodology

Introduction

This thesis aims to explore the subcultural⁷ beliefs, attitudes and behaviours of various groups of performance and image enhancing drug users found in gyms in the South-West of England, as a means of understanding the formation and practicalities of divergent user ‘ethnopharmacologies’ across user groups (Monaghan 2001), and the apparent increasing ‘normalisation’ of use (Parker *et al.* 1998) within certain sectors of the population. As an exploration of subcultural behaviours and norms, this research investigates these phenomena through a qualitative lens, sampling a small number of users in-depth, and framing their in-group perceptions using voice and narrative as analytical tools, which are contextualised through reference to the existing literature, and quantitative findings of other researchers.

Such qualitative research has long been the norm for explorations of drug-using subcultures (Becker 1953;1963; Young 1971), and has been credited with helping to ‘demystify’ some of the myths that surround drug use, which might not be addressed in more quantitative analyses (Neale *et al.* 2005). A qualitative approach can also be key to considering how drug behaviours occur, and how they are understood in different contexts amongst different social groups (Moyle 2013), which ultimately is the aim of this thesis.

As such, the methods employed in this research are those qualitative and ethnographic methodologies drawn largely from the works of the ‘Chicago school’ of sociology (Hart 2010; Blackman 2010), who famously conducted in-depth qualitative explorations of subcultural groups in the early-to-mid 20th Century (Burgess 1925; Shaw 1930; Foote Whyte 1943), and whose work influenced later writers on the sociology of deviance (Becker 1953;1963; Young 1971) and cultural criminology (Ferrell, Hayward and Young 2008). The ‘Chicago’ methodology focussed on telling the “youth’s own story” (Shaw 1927;1930; Burgess 1923), employing narrative and biographical methods in describing and interpreting the beliefs and behaviours of the subcultures surveyed (Blackman 2010; Merrill and West 2009), to explore and contextualise their “story” (Shaw 1930) in-depth, subsequently framing these qualitative findings in the context of quantitative data, such as census data, to develop a more complete theory of the subculture. The present research adopts these methods, to explore subcultures associated with PIED use through the voice and narratives of participants and associates of these cultures themselves, thus allowing the respondents’ ‘own stories’ (Shaw 1930) to form the core of the coming analyses.

This chapter shall consequently address the research methodology of this thesis in detail, giving first an overview of the epistemological and ontological positions that underpin this work, including the grounded

theory approach adopted in the course of research. This shall lead in to a discussion of the importance of the role of narrative and biography, and the ‘Chicago School’ approach in this work, as well as an exploration of researcher positionality and subjectivity. This shall be followed by a more descriptive discussion of the actual methods of data collection employed in this research, which shall explore the roles of personal observation, qualitative interviewing, the researcher’s field diary, and correspondence with participants in this work. Following this, the chapter shall turn to a discussion of some of the limitations to the research, with particular reference to elements of ‘hidden ethnography’ (Blackman 2007) in the thesis. Finally, this chapter shall offer a brief discussion of the process of assembly and presentation of data in this thesis, and how this links to the ‘grounded theory’ (Glaser and Strauss 1967) approach taken to the research.

Grounded Theory; Epistemological and Ontological Underpinnings of the Research

This thesis follows a ‘grounded theory’ (Glaser and Strauss 1967) approach to the discovery of theory from data, which is acknowledged as producing “definitions of reality that are inherently valid, verifiable and applicable” (Watson 2000:8). In contrast to ‘grand’ theories that are generated from logical assumptions and speculations, to which data is then fit, adopting a ‘grounded theory’ approach to data collection, analysis and presentation allows the researcher to be more faithful to their data, and therefore less “theoretically biased” when integrating data findings with theory (Glaser and Strauss 1967:34).

Whilst data collection is inherently approached with certain perspectives and biases, given the subjectivity of the researcher (see below), Glaser and Strauss (1967:33) note that a grounded theory approach, stripped of preconceived notions that dictate ‘relevancies’, can help to minimise such biases, since its inductive approach to generating theory minimises the risk of ‘exampling’, or confirmation bias, and allows a researcher to be more adaptive to data that might alter, or necessitate revision of their theory to date. Whilst the present research uses the framework of Parker *et al.* (1998) to analyse the ‘grand’ theory of drug ‘normalisation’ in the context of PIED use, therefore, the theory which informs this discussion, relating to the emergence of several divergent ‘categories’ of user with diverse properties and ethnopharmacologies, was generated through the constant comparative analysis of data collected in the field, and informed by emerging categories and properties of user, identified and refined through this comparative method of analysis (Glaser and Strauss 1967:108).

Glaser and Strauss (1967:3) suggest that theory inductively developed from data in this manner is likely to be better suited for its supposed purposes than theory that is logically deduced *a priori*, since it inherently reflects the ‘realities’ the researcher encounters in the field. Following these inductive methods of

comparative analysis, the present research generated theory initially through the identification and comparison of different ‘incidents’ observed during my time spent immersed in gym environments, leading to the discovery of several ‘categories’ of PIED user, with diverse ‘properties’, which as the work developed were subject to constant revision and refinement, as these conceptual categories were systematically “worked out”, with reference to new and emerging data. This “working out” of categories and properties from the collected data then guided the collection of further data, through inductive reasoning relating to which categories of user, and which of their properties, required further investigation to ensure sufficient data saturation had been reached (Glaser and Strauss 1967:108).

This method of simultaneous collection, coding, and analysis of data is key to grounded theory’s adaptive approach, which allows for further data collection to be guided by the conceptual framework generated to date (Glaser and Strauss 1967:60), thus modifying and refining theory until the researcher can be confident it has been tested sufficiently to draw propositions from the identified categories and properties. As Glaser and Strauss (1967:28) note, in this manner a theory is not ‘destroyed’ by data which contradicts expectations based on features identified to date, but is instead refined, and improved. This method means that data which is counter to the researcher’s initial expectations is not discarded or minimised through fear it “disproves their theory”, but instead can be seen as *enriching* the theory developed to date, and allowing for further evolution and refinement of the theory, based on the newly acquired data (Glaser and Strauss 1967:69). Grounded theory thus provides a representation of findings as they are truly experienced by the researcher in the field, and is easily able to adapt to findings that require revision of the theory developed to date, ensuring its applicability.

This epistemological and ontological position of interpreting ‘realities’ as they emerge from the data will be reflected in the coming chapters through the presentation of theory and findings in a ‘discussional’ manner, illustrating the theory of the work “as process”, and allowing the presented theory to “become quite rich, complex and dense”, in a manner that “makes its fit and relevance easy to comprehend” (Glaser and Strauss 1967:32). This will allow the reader to clearly see and comprehend how the theory emerged from the data (Glaser and Strauss 1967:229), and at the same time bring “thick description” (Geertz 1973) to the work, describing the data in such a manner that the reader will be able to not only “see and hear the people involved... but see and hear them in relation to [the] theoretical framework” (Glaser and Strauss 1967:241). The deep understanding of the theory and data this ‘thick description’ provides will better allow readers to make the ‘short step’ between understanding, and applying the theory presented, which it is hoped shall demonstrate clearly the validity of the propositions presented in this work.

This ‘thick description’ (Geertz 1973) shall be achieved primarily through the use of ‘voice’ as an analytical tool in the research, both through exploration and interpretation of the narratives presented by respondents in the research (Merill and West 2009; see below), as well as through the ‘discussional’ form to the presentation of theory and data, which shall invariably ground myself, the researcher, within the text

(Merrill and West 2009; Burkitt 2012; Blackman 2016). Through this ‘thick description’ of voice, feeling, emotion, and context, it is hoped this thesis shall bring ‘live sociology’ (Back 2007;2012), and ‘emotional imagination’ (Blackman 2016) to the interpretation of the cultural environment of the gym, providing the deep and vivid understanding that Glaser and Strauss (1967:230) suggest offers true “credibility” to research findings, or what Ferrell (1997), terms criminological *verstehen*.

Ethnographic Methods and Researcher Positionality

Drawing on the legacy of the Chicago school’s methodological approach (see Hart 2010; Blackman 2010), this thesis aims to combine the use of narrative, biography and reflexivity in a manner that will bring ‘live sociology’ to findings (Blackman 2016:66), providing the ‘thick description’ (Geertz 1973) and ‘subcultural imagination’ (Blackman and Kempson 2016) that will offer the reader deep understanding of the cultural environments explored in this research. Following Shaw’s (1930) exploration of the value of telling research participants’ “own story”, sociological methods of narrative and biography have developed, with both employed to offer a means of exploring ‘realities’ experienced by participants, in a manner which focusses more on “the nature and conventions of the stories people tell”, than being “fixed and objective” (Merrill and West 2009:10).

As Geertz (1973:18) suggests, culture must be interpreted in the context of “what, in this time or that place, specific people say, what they do, what is done to them”, with the role of biography and narrative in ethnographic research used in this manner to derive understanding from the ‘lived experience’, and interpretations of participants themselves, to understand the cultural context in which these experiences occur (Merrill and West 2009:25). With narrative further serving as a method by which research can be inductively guided (Merrill and West 2009:22), in relation to the ‘discussion form’ of theory noted above (Glaser and Strauss 1967), such ethnographic methods contribute to the epistemological approach of this work, helping to offer findings which inherently reflect the ‘realities’ experienced and interpreted by respondents themselves. Through the use of participants’ voices and narratives as an analytical tool, exploring the self-reflection of participants, and their emotions and feelings through the narratives they present, through which their actions can be contextually understood (Burkitt 2012), this thesis aims to provide the ‘thick description’ (Geertz 1973) of the lived experiences and cultural realities of participants that will provide ‘live sociology’ to the cultural environment of ‘the gym’ (Blackman 2016:66; Back 2007;2012).

The emotional analytical methods used to bring such ‘thick description’ to this work, and the subjectivity of narrative and biographical methods, requires a discussion of researcher positionality, since my own

involvement in the generation of findings, and construction of narrative in this research, invariably mean findings are ‘subjective’ (Merrill and West 2009; Blackman 2016). Mills (1959:216) argued that life experience is intimately connected to the methodological craft, with the experience of the researcher therefore an important consideration to explore in the construction of findings. Along with Becker’s (1967:239) suggestion that the purpose of sociology is not to “not take sides”, but rather to acknowledge “whose side we are on”, ethnographic methods are used to produce work that is “inherently personal, political and partial” (Ferrell 1997), in which the researcher’s auto/biography (Stanley 1990), and position in the work is acknowledged as informing their findings (Merrill and West 2009).

Whilst the importance of subjectivity and researcher positionality has been understood for some time, with reflexive, narrative and biographical methods employed by members of the ‘Chicago school’ (Blackman 2010:195), with the growing awareness of the importance of researcher positionality and subjectivity brought about by the ‘narrative turn’ in sociology (Merrill and West 2009), it is increasingly acknowledged that ethnographic research of this type must contain some degree of auto/biography (Stanley 1990; Letherby 2000; Merrill and West 2009), to acknowledge and account for this ‘life experience’ (Mills 1959), as well as the tension that exists between the researcher’s personal relationships with participants, and the demands of sociological ‘objectivity’ in fieldwork (Blackman 2016), including the role of the researcher’s feeling and emotion in dialogues with respondents (Burkitt 2012; Blackman 2007;2016). Such reflexivity allows the researcher to avoid ‘hidden ethnography’ (Blackman 2007), by taking responsibility for and showing their own subjectivity, and allows for deeper exploration of the degree of collaboration between the researcher and researched, explaining how meaning is crafted in the text (Blackman 2016; Burkitt 2012), further allowing the researcher to achieve Geertz’s (1973) objective of a ‘thick description’.

Building on the feminist epistemological position that work should be fundamentally concerned with “how people come to understand what they do” (Stanley 1990; Cotterill and Letherby 1993; Letherby 2000;2003; Merrill and West 2009), it is therefore appropriate that I locate myself within the coming work, which will provide some details of the contextually located reasoning processes that give rise to my findings (Letherby 2000:94). By reflexively acknowledging my positionality, the auto/biographic (Stanley 1990) element of blending and interpreting my own experiences with the biographies and narratives of participants is accounted for in the research findings (Merrill and West 2009; Burkitt 2012), reflecting Blackman’s (2016:76) observation that ethnography “is about working together” with participants, and exposing one’s personal stances in presenting participants’ narratives. This not only helps to bring “emotional imagination” (Blackman 2016) to the work, but will also minimise the risk of ‘hidden ethnography’ (Blackman 2007), as shall be discussed towards the end of this chapter.

Merrill and West (2009:99) suggest that the role of the self in choosing a topic is a significant factor to explore in the course of research, since this personal choice can have implications for one’s findings. Similar

to Letherby (2000:91), my research area is not one I was “employed to undertake”, but is a research area I “chose because of my own life experiences”, and these experiences inform the construction of my findings throughout. My autobiography, and the manner in which this interacts with the biographies and narratives of participants (Stanley 1990), is therefore worth detailing at this stage, to acknowledge my subjectivity, and provide the lens through which the findings and interpretations presented in the coming chapters can be most appropriately understood.

I came to study this area of research following my personal experiences within powerlifting culture, through which I was introduced more broadly to the cultural environment of ‘the gym’. Discovering powerlifting shortly after completing my undergraduate degree in 2010, following an introduction by a friend (featured as a participant in this research) who had already participated in powerlifting competitions, and was looking for a “training partner” in the local area, I became involved in the culture throughout the two year period in which I undertook my Master’s study, and subsequently determined when I came to make applications for doctoral research projects that I was interested primarily in studying elements of the ‘gym culture’ in which I had for the past two years been immersed. This decision was further influenced by my academic experiences (Letherby 2000), through which I had developed an interest in conducting ‘real’ research after reading Jay MacLeod’s (1987) ethnography *‘Ain’t No Makin’ It’* as part of a criminology module, during my time as a law student. My interest in this work encouraged me to make the change from law to criminology, and subsequently research sociology, as I developed a desire to conduct such ‘real’ work myself, interacting with participants in the field, and portraying their lived experiences and ‘realities’, as opposed to the often rote memorisation and ‘hands off’ approach I had experienced in the study of the law.

To make the ‘personal’ political (Stanley and Wise 1990), the reasons for my initial interest in powerlifting itself, which encouraged me to engage in this research project, are worth acknowledging here, since these reflect personal characteristics relevant to my construction of research findings, as well as my ‘internal conversation’ and feeling, through which the dialogues presented here were interpreted (Burkitt 2012). Growing up in a post-industrial, rural working-class area, I like many of my peers faced what Klein (1993) termed a “masculinity in crisis”, as those young men who do not join the military in rural Devon often have limited job prospects, which perhaps manifests itself in a greater obsession with ‘substitute’ masculinities, or competitiveness of sorts (Willis 1977; Giddens 1991; Klein 1993; Connell 1995), similar to that observed in the Welsh valleys for these same reasons in Monaghan (2001). Although my academic studies offered me opportunities not available to my peers in the gym, therefore, I nonetheless shared many of the same experiences and frustrations they had lived, growing up in an uncertain world, which along with my acquiring the body capital and requisite knowledge to participate in two powerlifting competitions (in 2012 and 2013), allowed me to become an ‘insider’ to this subculture prior to commencing my ‘official’ studies in 2013.

My status as an ‘insider’ to powerlifting culture, however, was tempered to some extent by both my

academic background, which influenced my ability to view my own cultural norms critically (Letherby 2000), as well as a medical condition which kept me from fully embodying the archetype of the powerlifter, meaning I to some extent always held only an ‘observer’ status within the subculture, since it precluded me from being competitive in the higher levels of the sport. Letherby (2000) notes how a researcher’s personal medical history can impact both their research interests, and positionality in the field, and reflecting this, it is clear that my spinal disorder, which whilst not debilitating in daily life nonetheless prevented me from being truly competitive in powerlifting, likely influenced my critical insight of this group (see Wedgwood 2009), since I could never fully ‘become’ a powerlifter. As shall be shown in chapter four, a key factor in motivating members of this subculture was a desire to be competitive at a high level, with my medical history therefore separating me to some extent from this principle motivation, and consequently subcultural norm. Whilst my greater familiarity with powerlifting culture in comparison to the other groups studied in this research necessarily influences my findings, therefore, I nonetheless remained to some extent a critical observer, even whilst an ‘insider’ to this subculture, and in presenting this description of my personal background, and influences, the findings presented in the coming chapters can be viewed with this autobiographical information in mind.

Whilst it is not uncommon for researchers to base their work on connections already held to the studied subcultures (e.g. Fussel 1991; Moore and Measham 2006; Taylor 2011), it is necessary to acknowledge that my findings are nonetheless framed by my own lived experience (Merrill and West 2009). Consequently, my own experiences as a participant in the cultural environment in the gym, and an ‘insider’ to powerlifting culture, will therefore be referenced at various points in the coming chapters, since an ‘insider’ who does not acknowledge such experiences will necessarily be faced with interpretative issues (Taylor 2011), and therefore subject to ‘hidden ethnography’ (Blackman 2007). By placing myself in the work in this manner, the subjectivity of my position, as well as the manner in which my own biography might influence the interpretation of participant narratives, is here acknowledged as “open to scrutiny” (Blackman 2016), showing the coming work as the emotionally reflexive, and interpretative ‘collaboration’ with participants it is (Blackman 2016; Burkitt 2012; Letherby 2000).

Friendship and the ‘Intimate Insider’

In discussing my positionality in the research, and the idea of ethnography as ‘collaboration’, it is worth considering some of the tensions created in my position as both a friend to participants, and an ‘academic’ researcher, which will highlight both my positionality in the work, and also demonstrate the importance of reflexivity and emotion (Blackman 2016; Burkitt 2012), discussed above. Whilst numerous researchers into

drug-using subcultures have used friends as participants (Measham and Moore 2006; Taylor and Potter 2013; Moyle 2013), the present research added an extra dimension to such ‘insider’ study, in that I was perceived by a number of respondents as not only a ‘friend’, or ‘intimate insider’ (Taylor 2011), but also an ‘authority’ on PIEDs, owing to their being aware that I was researching this topic. This meant that, in addition to the ethical considerations observed by researchers such as Moyle (2013), I was faced with situations where I crossed emotional boundaries (Blackman 2016), in being asked for advice, or help, by respondents during the research period. Coffey (1999) notes that such occurrences can sharpen our abilities for critical reflection, and following Blackman’s (2007:699) advice to make “emotional contact between observer and participants... explicit”, and give the ‘emotional imagination’ that brings ‘realism’ to experiences in the field (Blackman 2007;2016), I shall therefore provide two examples of where such tensions, leading to reflexivity, were explicit in my work.

The first example of such a conversation involves Mark, a personal trainer whom I saw regularly in one of the gyms in which I conducted this ethnography, and who showed interested in my project from its inception. Mark frequently spoke to me about steroids, and my conversations with him provided valuable data, regarding Mark’s position as a ‘natural’ trainer in an environment where drug use was becoming increasingly ‘normalised’, as the coming chapters will show. One day, however, Mark approached me earnestly in the gym, saying he was struggling to remain ‘competitive’ in attracting clients, since the majority of trainers offering services at his gym were using performance-enhancers. Since these individuals did not openly advertise themselves as being on drugs, Mark found he was losing customers, who were often basing their choice of trainer on who looked better, assuming them to have the most knowledge, based on this body capital. Mark spoke of how “*unfair*” it was that trying to run his business “*honestly*”, when other trainers were “*dishonest*”, was hurting him financially, and then asked me if I could give him “*any reason why [he] shouldn’t*” use the drug clenbuterol, to help him get more ‘ripped’ for his advertisement photographs (field diary 02.12.2014).

Mark saw me as an authority, based on my studying the subject of steroid use, and was looking to me for advice. It was clear to me from our previous interactions that Mark did not actually want to take performance enhancers, but was frustrated at losing earnings to trainers who were. Based on this feeling, I promised to send Mark all the information I had on clenbuterol, so he could make an informed choice. That night, I emailed Mark links to some articles on clenbuterol and its effects, as well as some observations regarding potential negative effects I had made scanning the literature, based on his request for reasons he “*shouldn’t*” use the drug, and he thanked me when I saw him the next day, stating he had decided not to use the drug after all, as I had perceived (field diary 03.12.2014). I was glad when I heard this, given how often I had heard Mark talk about training to be healthy, and not needing drugs. Mark had wanted me to give him a reason to not take the drug, but had felt the need to ask in a manner that allowed him to think it was an ‘objective’ choice, and I had intuited that taking his request at face value would be the most appropriate response, based on my knowing him. Doing so allowed Mark to retain autonomy in the decision

(Blackman 2016), and allowed me to balance some of the disparities in power that might exist between a perceived ‘authority’, and one asking for help (Crick 1992). This event both clarified for me the level of pressure experienced by ‘natural’ trainers to go on performance-enhancers when immersed in such environments (see chapter four), and highlighted for me how my own role in the research, and my feeling and emotion in such situations, could not be ignored in reporting my findings (Burkitt 2012; Blackman 2016).

Feeling and concerns relating to intimacy manifested even more explicitly in a conversation in the gym with my friend ‘Johnny’, and a friend of his, when Johnny asked me to dispel some ‘myths’ of steroid use to his friend, who was trying to discourage Johnny from using, by talking about the negative implications and harms of steroids. This created an awkward situation, because Johnny was turning to me for honest support in verifying his claims that certain harms associated with steroids were either exaggerated or misconceptions (see Coomber 1999;2013), but I was aware that in offering such support, I could be “talking him into” using the drugs. To again engage in emotional reflexivity (Burkitt 2012; Blackman 2016), I felt Johnny was looking to convince himself that steroids were “safe” as much as his friend, in asking me to dispel these myths, and although I was able to justify to myself that providing ‘objective’ facts about the drugs was not ethically ‘wrong’, since education is a key harm minimisation practice I have advocated elsewhere (see chapter six), I still felt uneasy enough about doing so that I commented upon the “blurring of lines” between my position as researcher, and friend to Johnny, in my field diary that night. As Taylor (2011) notes, friendship comes with certain ethics that must be negotiated by researchers, and ‘insiderness’ can leave little room for distance in interactions such as this.

These experiences highlight the ways in which my positionality and emotions influenced the construction of research findings, and further had an impact on ‘realities’ experienced in the field. The position of this ethnography as both a ‘collaboration’, necessarily requiring reflexivity, and acknowledging of the role of emotion (Blackman 2016; Burkitt 2012), is therefore clear, and these stories, as well as other personal interactions, shall be returned to in the coming data chapters. For now, however, this chapter shall move away from the epistemological and ontological underpinnings of this research, and give an overview of the practical elements of data collection in the coming work. This shall form the focus of the following section.

Data Collection Methods

Following discussion of the epistemological and ontological positions underpinning this research, it is worth briefly detailing the exact methods of data collection and presentation used in the construction of this thesis. As noted, these draw on the qualitative methods of the Chicago school (Hart 2010; Blackman

2010; Merrill and West 2009), with the reasons for adopting these methods, and the grounded theory framework underpinning this research discussed above.

Following the ethnographic methods noted above, the first stage of data collection for this project involved my immersing myself in the cultural environment of the gym, where I began by making notes and drawing inferences relating to incidents observed, which would later inform the categories and properties identified following the grounded theory approach to comparative analysis (Glaser and Strauss 1967). These observations were then expanded, and the theory guided and refined, through my conducting in-depth, semi-structured interviews with a range of individuals involved in some way in gym culture. These provided the data that allows this thesis to use the ‘voice’ of participants as an analytical tool (Merrill and West 2009), and provide the narrative element to the work that will offer ‘thick description’ (Geertz 1973), and allow the reader to “see and hear” the respondents in the context of the theoretical framework developed (Glaser and Strauss 1967:241). This in-depth interview data was further supported by my recording significant conversations and observations in a researcher field diary, which captured elements of respondents’ narratives, and cultural context not included in the interview data. Similarly, I include quotes from personal correspondence with respondents, to again add more depth to the data acquired through these means, all of which informed the narrative and biographical approach to data analysis and the construction and presentation of findings (Merrill and West 2009), detailed above.

Finally, I further conducted study of relevant literature, ‘popular works’ such as the often cited documentary *‘Bigger, Stronger, Faster’* (Bell 2008*i*), and ‘information caches’, including the internet, which I could compare to both my personal observations, and the narratives offered by respondents through the above means of data collection. This follows Glaser and Strauss’s (1967:161) recommendations for integrating ‘documentary data’ with diverse primary ‘field data’ sources, in order to ensure ‘optimal’ development of one’s theory, and a deep understanding of the subcultures explored.

In total, respondents from eight gyms in the south Devon area are directly cited, with their stories and narratives involving further discussion of individuals they know and have interacted with, adding breadth to the work’s deep, interpretative findings. The following sections shall briefly overview how the various methods of data collection employed in this thesis were used, and how they tie in with the epistemological and ontological underpinnings of the work.

Qualitative Interviewing

The principal data used in the course of this thesis takes the form of verbatim quotes from PIED users, and

those associated with using subcultures, taken from transcripts of in-depth interviews, an approach that allows significant depth and accuracy through citing the words of the drug users themselves (Coomber 1997*i*; 1997*ii*; Moyle 2013), thus avoiding interpretative issues that can arise when a researcher does not present the subject's "own story" (Shaw 1930; Merrill and West 2009). Whilst, as noted above, the "reality" perceived by a researcher in the field is necessarily subjective, the use of narrative and biography minimises some of these interpretative risks, by framing the data as subjective, and reflecting the 'realities' that are experienced by the respondents themselves.

Access to interviewees was based on my immersion in the cultural environment of the gym, where I came to know individuals whom I then recruited for interview. Those who showed interest in the project in general discussion, and were believed likely to have knowledge of PIED use or subcultural attitudes, were asked whether they would be willing to participate in an in-depth interview, with assurances of anonymity at this stage given. 13 initial participants were recruited in this manner, of whom 10 agreed to be tape-recorded, which allowed the verbatim quoting from transcripts in the analysis phase of the research, which ensured respondents' own narratives and 'realities' could be captured in my interpretation of findings.

Whilst the majority of interviewee recruitment occurred through my approaching individuals I met in the field, there was a further "snowballing" (Biernacki and Waldorf 1981; Bachman and Schutt 2001) approach adopted to broaden the range of the project, with respondents asked to pass my details on to anyone they knew to either be a PIED user, or have familiarity with user subcultures or attitudes, who might participate. This approach resulted in a further five interview respondents ('Eddie'; 'Mariusz'; 'Stephen'; 'Simon' and 'Tyson'), of whom four agreed to in-depth, tape-recorded interviews, adding significantly to the primary empirical data obtained.

The broad range of individuals interviewed meant a large amount of high-quality, representative data was uncovered, with interviewees including numerous sport-focussed users, a gym owner, a personal trainer, a sports physiotherapist, several image-oriented PIED-users, an 'old school' bodybuilder, two commercial PIED suppliers, and one member of a group of hedonically-motivated participants in the burgeoning "*lad culture*" (see *Dramatis Personae*). This satisfied Glaser and Strauss's (1967:47) recommendations for data saturation through looking at a diversity of 'categories', using 'theoretical sampling' rather than statistical sampling to ensure the most complete theory was developed.

The interview process itself consisted of semi-structured, conversational interviews, around a set of questions related to attitudes towards use, the process of becoming a user, and how use was conducted long-term. The conversational approach was adopted to allow respondents the maximum freedom to express their experiences and beliefs in their own words, which allowed both for respondents' own narratives and interpretations to be captured (Merill and West 2009), as well as for exploration of themes that came up unexpectedly during conversation, which might not have been explored in a rigid question-and-answer structure (Warren 2004; Monaghan 2001). As suggested above, these themes often reflected

my own emotional involvement in these dialogues (Burkitt 2012; Blackman 2016), and data collection was therefore guided by my intuiting avenues I felt would lead to relevant insights from participants, again demonstrating the merit of the qualitative approach to this work. Following Glaser and Strauss's (1967:48) observation that relevant data points can be narrowed as the theory is refined, interviews ranged from very broad explorations at the beginning, or when accessing a member of a previously unexplored subculture, to short when relevance was more known.

The 14 tape-recorded interviews ranged in length from just under 30 minutes to over 90 minutes, depending on the time the respondent had available, their willingness to speak, and my satisfaction that sufficient data saturation had been achieved, as articulated by Glaser and Strauss (1967:62)⁸. The length of these interviews meant that each topic addressed could be explored in-depth, and gave opportunity for the personalities, beliefs and attitudes of the interviewees to show through, thus allowing more informed interpretation of their responses, and capturing in detail each participant's 'story'. These interviews were typed up verbatim, with names and place names anonymised following standard ethical protocols, to allow for the direct quoting of conversations in a manner that allows the narratives of participants to form the focus of findings. Analysis and coding of interview data occurred simultaneous to collection, in order to guide the research, as the theoretical framework developed in this manner (Glaser and Strauss 1967).

In the course of research, four individuals agreed to interview who were not tape-recorded, either because they did not wish to be recorded over fears of repercussions ('Tyson'; 'Big Steve'), or because circumstances made doing so impractical ('Chris'; 'Harry'). These interviews were narrowed to specific subject areas relevant to the individual's experience (e.g. for Supplier Tyson the prevalence of use he observes, and perceived motivations of those to whom he sells), and ran for only 10-15 minutes. These shorter interviews were then written up by myself at the earliest opportunity, generally within an hour, and in doing so I strove to capture the individual's manner of speech, and personality, whilst keeping the details as close as possible to what I could recall being said. Excerpts from these individuals given in the main body of the thesis are all taken from my notes made immediately post-interview, and therefore are as close to the original statements as achievable without a recording and exact transcript. Such methods have been employed by researchers elsewhere (MacLeod 1987; Venkatesh 2008), and by necessity were employed by the early 'Chicago school' sociologists (Burgess 1925; Shaw 1930; Foote Whyte 1943), and although the opportunity for a researcher's own biases or false perceptions to creep in may arise where quotations cited as empirical data are not verbatim (Angrosino 2007), when read in the context of the above discussions of my positionality, and subjectivity in the findings, it is hoped this data nonetheless proves valuable in the coming analyses.

To acknowledge the difference between verbatim quotations of respondents, and those recorded by myself *post factum*, quotations and findings drawn from tape-recorded interviews in the coming chapters will therefore be cited as 'interview', whilst those taken from my notes on the four unrecorded interviews

will be cited as ‘field interview’, to avoid any confusion. The project’s *Dramatis Personae* additionally notes which individuals gave recorded interviews, and which did not, and should be referred to by the reader if they feel such context necessary at any point.

Researcher Field Diary

In addition to the 18 interviews conducted, further data is cited in the form of excerpts from a field diary, maintained during the course of the study. This method of data collection is again drawn from the Chicago school (Burgess 1925), and is common practice in qualitative research based on researcher immersion in the field (Kvale 2007; Monaghan 2001; Blackman 2007; 2016). My field diary was used to catalogue significant events, and conversations of interest that occurred during my time in the field, but that were not made in the context of a formal interview structure.

Field diary entries were made in a similar manner to the four unrecorded interviews discussed above, with my writing down what was said, or had occurred, at the soonest practical moment following an exchange or event, so I could capture the scene or conversation as close to its occurrence as possible, thus ensuring citations from these notes would be as accurate as feasible without a tape-recording. As with unrecorded interviews, field diary entries are subject to my personal, subjective interpretation of the occurrences documented, and additionally contain personal reflection, and discussion of events, contributing to the degree of emotional reflexivity in the sections where these are cited (Blackman 2016; Burkitt 2012). Instances of respondents cited in the form of field diary notes are therefore made clear in the main body of the thesis, with such instances cited as ‘Field diary [date]’, to reflect the different form this data takes.

Often field diary entries cite a single comment, or a single exchange, and are generally employed as a means of further evidencing, or supplementing the primary data drawn from interviews. The field diary was an invaluable tool, as it allowed me to capture the opinions of some individuals I did not know well enough to interview, but who were happy to speak informally in a gym environment, often between ‘sets’ of lifting weights. Although the individuals cited in this manner were all aware that I was conducting this research, and would be writing about the things I saw and heard whilst in the field, there was not always formal consent given up-front to record each of these entries, as was given for interviews. Ethics board approval was given for this practice on the grounds that gym-based conversations occur in ‘public space’ (Kozinets 2009), and diary entries would be anonymised by the researcher prior to publication of selected passages. Additionally, this practice has a long history (Angrosino 2007), and when dealing with a work based around researcher immersion, the researcher will naturally be exposed to some data without prior consent that this may be recorded, and it would not be practical to exclude such data simply on the grounds that no explicit

consent was given, in the case of anonymised citations of conversations where no covert or misleading methods were utilised (see Foote Whyte 1943; Monaghan 2001; Venkatesh 2013). Holland (2007) warns that sociologists should not be too obsessive about consent when conducting fieldwork, a suggestion supported by Blackman (2007), who warns this may produce ‘hidden ethnography’. As such, both personal observations made by myself relating to my experiences in the field, and the explicit citing of individuals from my diary entries are used in the coming findings.

Personal Correspondence

On occasion, data is cited in the form of personal correspondence with respondents, generally in the form of clarifications given by interviewees, at a date following interview. Such correspondence occurred either by email, or text message, and as such is cited verbatim, as with selections from interview transcripts. This correspondence was usually solicited (for example by my asking a respondent to elaborate on a certain point made in interview at a later date), and in cases where it was not, the individuals involved were all aware of the research aims, and that I was collecting data for the project. This again is a commonly accepted method in qualitative research into drug-using subcultures (see Moyle 2013), and was used to help refine the theory generated to date from interview and field data (Glaser and Strauss 1967). Such data is cited as ‘Personal correspondence [date]’ where it appears.

Limitations

The above detailed methods allowed for a significant degree of in-depth qualitative data collection, with some 27 individuals being sampled in total, including 18 in formal interview, in addition to observations made by myself whilst ‘in the field’, which capture a broader sample of the cultural environment of the gym. These methods were not without their limitations, however, and it is worth briefly highlighting these, so that the analyses given can be evaluated appropriately, with all necessary context.

Issues with Recruitment

Recruitment as described above allowed me to speak with, and in some cases interview in-depth, individuals from a range of subcultural groups and gym-related occupations, to a degree where data saturation in many of the areas highlighted for study occurred (Glaser and Strauss 1967). In spite of this range and depth, however, it is worth noting that no active members of the hedonic young male “lad culture” who actually use steroids were recruited for interview, and so analyses of this group are based solely on the perceptions of ‘outsiders’ to this subculture. Since this subculture forms one of the key sub-groups analysed in the course of this thesis, this limitation is worth addressing here.

Primary data cited relating to this user subculture is consequently largely drawn from individuals such as gym owners, or competitive trainers, whom it is acknowledged might have certain biases or preconceived notions of their own regarding this group. Although gym-user Josh participated in something of a similar culture of use, on which he may offer some ‘insider’ perspective, this nonetheless occurred prior to the current surge in ‘hedonic’ image-oriented use (see previous chapter) and is thus likely to be to some extent different in nature to that adopted by the modern, emergent “*lad culture*”. Additionally, given Josh left this subculture some years ago, it is possible he could “selectively remember” things that highlight his current self-image and identity (Blackman 2004:162), thus diminishing the value in the qualitative method’s ability to tell the “own story” of the youth subculture’s members (Shaw 1930; Merrill and West 2009).

The most reliable information on this group’s activities and beliefs therefore comes from the interview responses of ‘Pete Robinson’, a trainee personal trainer who works at a 24-hour ‘commercial’ gym, and was also involved in the hedonic night-time economy-oriented activities of one such group, although did not himself use PIEDs, or participate in the image-obsessed ‘social media’ element of this culture (see chapter four). Pete might therefore be considered an ‘insider’ to this subculture in the same way as an amateur, ‘natural’ strength trainer would be considered an ‘insider’ to competitive powerlifting subculture. Whilst not optimal, it is nonetheless believed that claims made regarding this group in the data chapters are therefore sufficiently evidenced based on these ‘outsider’ observations, though this of course means the motivations attributed to these individuals, even if analyses of their actions are correct, are naturally speculative, a fact which must be borne in mind when drawing conclusions about this subculture (Angrosino 2007).

This under-representation of respondents from this subculture arose for a number of reasons. Recruitment of powerlifters and sport-oriented users was assisted since, as a former powerlifter, I was visibly a member of these individuals’ ‘in-group’. This additionally benefitted me in recruiting ‘competitive’ image-oriented users to the study, who observing I was a dedicated sportsman were willing to talk to me about their use. Unfortunately, this ‘in-group’ affiliation based on body capital or ‘technical proficiency’

(Monaghan 2002*i*) did not extend to younger, hedonically-oriented young men, and as I was visibly not a member of this subculture, I therefore struggled getting them to speak to me (further limitations from this shall be addressed in chapter five).

Lack of funding for this research also affected recruitment from this subculture in two ways. First, I received requests for financial compensation for agreeing to interview. As Moyle (2013:130) notes, a payment of £20 can be sufficient motivation for an initially-reluctant population to engage a researcher, and a lack of such funding, or ethics approval for such payments (necessary in the case of giving money to an illicit drug-using population) undoubtedly meant fewer individuals were recruited for interview than had this been a funded project. This disproportionately affected attempts to recruit ‘hedonic’ young male users, since as shall be discussed in chapter four, this group is more materialistic, and focussed on a conspicuous lifestyle than other user categories, and thus had greater concern for financial reward for their efforts than the more ‘academic’ sport-oriented users. They also appeared to have higher average *time-preference* (Mises 1949)⁹, and less vested interest in disproving “myths” of use than sport-focussed users, who were happy to agree to interview without financial reward for this reason (see Coomber *et al.* 2015*i*; Moyle 2013).

Secondly, lack of funding led to the requirement to seek employment whilst working on this thesis, which was found at Devon and Cornwall police headquarters¹⁰. This created a barrier to participation when Pete, on my requesting he act as a ‘gatekeeper’ (see Groger *et al.* 1999) and ask his hedonically-using friends to participate in interviews, happened to let slip where I worked, which by his account “scared them off” speaking to me. This was unfortunate, although since I interviewed Pete for over 90 minutes in-depth (the longest interview in the course of this project), it is likely much of the important data I could have obtained from his friendship group had already been relayed to me by himself.

Whilst data gathered from within ‘lad culture’ is therefore to some extent limited, lacking complete ‘saturation’ (Glaser and Strauss 1967), this is not the most important area in which data is limited in this project. It is therefore worth addressing at this stage the element of ‘hidden ethnography’ (2007) to this work, and how this may affect research findings.

‘Hidden Ethnography’

Blackman (2007:795) highlights the need for researchers to include in their findings incidents which might have the feel of personal failure, in order to acknowledge and account for possible gaps in their research, which if not addressed can lead to ‘hidden ethnography’. Before moving on to the findings of this research, therefore, it is worth addressing the main areas in which my data might be incomplete.

In the coming findings, it is notable that there is only a single female respondent ('Rose'). Whilst the temptation exists to minimise this gap in the data, Blackman (2007:701) discusses the need for researchers to acknowledge such shortcomings, to ensure a "realistic account of fieldwork" is given, and further highlights the need to make 'hidden ethnography' transparent, as a necessary factor in reflexive sociology. It is therefore necessary to discuss my failure to talk to female steroid users in the field, as well as other areas of 'hidden ethnography' presented by my research findings.

In ethnography, there has long been a trend of male researchers finding it difficult to access female spaces (McRobbie and Garber 1975; Back 1993), or as in this case, access females within heavily masculine spaces. As Blackman (2007:706) notes, to avoid 'hidden ethnography', it is necessary to look critically and reflexively at the reasons why I did not engage with females in these gym environments to the degree I was able to engage male respondents. Although women are thought to use illicit performance and image enhancing drugs at a lower rate than men, this does not fully explain this element to the data, since longitudinal studies show women do in fact use these drugs, and other studies have been able to recruit female respondents, even if at lower rates than males (e.g. Bates and McVeigh 2016).

As Blackman (2007:706) notes, there is a somewhat conservative tendency amongst male ethnographers when observing young women, which I must acknowledge in myself. This in part contributed to my ill ease at asking women whether they were using image-enhancing drugs, as this topic seemed 'inappropriate'. Since many of these drugs (in particular steroids) are known for their 'masculinising' effects, there was a strong degree of embarrassment for me in approaching women regarding whether they used them, since an inference of my asking a woman if she took steroids might be that she looked "manly". Whilst in bodybuilding-specific gyms such questions might be within the realm of acceptability (Monaghan 2001), approaching women who are not involved in such competitive subcultures with this suggestion posed enough risk of embarrassment that it deterred my collecting such data from women in 'commercial' gym spaces.

Embarrassment is not the only factor to consider here, however, since the gym environment is both a highly sexualised one, as well as an aggressively 'masculine' one. To give an ethnographic description of the cultural environment of 'the gym', and bring 'live sociology' (Back 2007;2012; Blackman 2016) to this discussion, one can see that 'commercial' gym environments are geared towards an interpretation of masculinity that is overt, hierarchical and intimidatory. This purpose is visible in the very layout of gyms, with changing rooms constructed to encourage men to 'show off' to one another, through the use of 'open plan' layouts, with post-shower 'drying space' positioned in view of the remainder of the changing room, an encouragement for men to display themselves symbolically (Connell 1995). The remainder of the gym, with its stark downlighting and mirrored walls, further adds to this feeling of the gym as a 'stage', where men visibly display their dominance, in the form of showing off their bodies. This emphasis on 'masculine display' not only mirrors Klein's (1993) observations of reaction to 'masculinity in crisis', but as noted in the previous chapter, can be linked to Connell's (1995) theories of hegemonic masculinity, with young men enforcing behaviour in gym

environments through overt displays of dominance, and implied threat (see chapter four). The presence of groups of young men training together, overtly occupying space, and making clear they ‘control’ activity in the portions of the gym they are “working out” in, further emphasises this ‘feel’ to the gym, implying dominance, and threat, a fact noticed both by myself, and other observers I spoke to during the course of research.

With members of ‘lad culture’ consciously striving to be “*the alpha male*”, as one respondent phrased it, and using enhancement drugs in part so that “*should two alpha males clash, you can handle it, you can have a fight*” (‘Pete’, interview), there was perceptible threat to my personal safety in the gym, should I behave in a manner which these young men considered a violation of their constructed ‘masculine norms’ (Connell 1995). If questions directed towards a female patron should be taken “the wrong way”, given the gym is also a highly sexualised environment, (as noted last chapter with reference to Walters (2011), and as shall be illustrated further in chapter four), I therefore risked not only embarrassment, but had the further concern that young men in this aggressively ‘masculine’ space might harm me for any perceived ‘infraction’ of their cultural norms, furthering their position in the ‘masculine hierarchy’ in doing so.

Between my conservative tendencies to avoid ‘inappropriate’ remarks, and concerns for my physical wellbeing in a space dominated by hierarchy-obsessed young males, therefore, I did not gather data from drug-using females in ‘commercial’ gym environments, ultimately speaking to only one female regarding her drug use (‘Rose’), in a powerlifting gym where the ‘aggressive’ atmosphere generated by groups of ‘lads’ is not present, and women are seen more as fellow trainers, and not the ‘objects’ over which ‘ownership’ must be asserted, as implied by the sexualised, ‘porno chic’ atmosphere in many ‘commercial’ gyms (Gill 2011; Walters 2011), which is mostly absent in ‘hardcore’ gyms¹¹. In acknowledging this shortcoming in the data, I hope to account for the degree of ‘hidden ethnography’ (Blackman 2007) this limitation to my sample might create in the coming findings, as well as suggest a possible future area for research building on this piece to focus on, as shall be reiterated in the thesis conclusion (chapter eight).

Embarrassment further emerged as a limiting factor in my approach to exploring sexual practices amongst members of the hedonic ‘lad culture’, which as shall become clear in the coming chapters, is heavily oriented towards masculine dominance, and sex, making such data relevant to a true understanding of this subculture’s construction of norms. Although aware that exploring the sexual practices of this group could provide valuable data on their conceptions of masculinity (see Anderson 2009), in interview with ‘lad culture’ member Pete, I held back on asking questions explicitly relating to sexual activity, out of the concerns of embarrassment and risk noted above. Although I did acquire some data on this subculture’s sexual practices from Pete, and others, as will be discussed in chapter four, it is necessary to acknowledge that this data is incomplete, since I did not explore it in the depth I afforded to other topics, owing to these fears. Whilst there is some exploration of male sexual practices in this thesis, therefore, it is necessary to acknowledge these difficulties in data collection, to frame my findings in a manner that reflects the reality of my experience in

the field, and acknowledges the elements of ‘hidden ethnography’ in my research (Blackman 2007).

Geographical Considerations

This research was based in south Devon, and is specifically an ethnography of the gym environments found in this area. As with Monaghan’s (2001) research in the Welsh valleys, however, this results in research that must be acknowledged as specific to its place and time, with the findings reported necessarily reflecting the rural, working-class context from which they emerged. The realities of this consideration likely have consequences for findings relating to both how drugs are accessed by respondents, as well as in the life opportunities present for the young men studied. This is worth noting at this stage, as it may affect some of the findings in the data chapters.

In particular, it is worth noting that more young males look to join the military in south Devon than much of the rest of the country, with the marine bases at Lympstone and Plymouth being very prominent, and enlistment seen as a prestigious career in such a rural, and conservative region. This may well explain some of the findings described in chapter six, in relation to the willingness of participants to consult GPs, or visit NSPs.

Likewise, it seems probable that the means of access detailed in the following chapter could be distinct to those one would observe in a city, or more urban county, and since both Monaghan (2001) and Coomber *et al.* (2015*i*) similarly conducted their research in rural regions, it is likely that in spite of these three independent works all being indicative of a certain pattern, their grounding in country life and attitudes skews findings away from what might be observed elsewhere.

It is worth noting, however, that the geographical context of the research might in fact further evidence assertions made, given a factor in the drug ‘normalisation’ argument is the suggestion that drug consumption is becoming more diverse, and now includes youth from rural locations (Parker *et al.* 1998; Blackman 2004). This could suggest that evidence of normalisation amongst participants might reflect even greater cultural acceptability than would similar findings amongst urban groups for whom drug use perhaps has a longer history, and is another factor worth considering when evaluating the findings of this research. As a qualitative subcultural investigation, however, it is not believed these seeming limitations will impact the validity of findings, since the “local variation” of youth cultures (Blackman 1995) is acknowledged and accounted for in the coming data chapters.

Assembly and Communication of Data

Data analysis for this project occurred simultaneously alongside data collection, with the generation of theory through the constant analysis of data guiding the research, following the grounded theory approach (Glaser and Strauss 1967). Interview transcripts and field diary entries were coded by myself whilst data collection was still underway, using manual methods of coding, as these are believed to be more reliable than digital methods, which might struggle with idioms, turns of phrase and slang terms, which are often applied to drugs and drug use (Coomber 2006*i*; Monaghan 2001). Additionally, in a narrative-heavy piece of research such as this, the full context of statements is of great importance, meaning isolating words or phrases in computerised searches might lead to false conclusions being drawn, when compared to reading transcripts in full, and extracting quotations “by hand”. As such, all analysis and coding was performed by myself, simply by reading and cataloguing data, following traditional methods of analysis (see Glaser and Strauss 1967).

The data was then assembled based on my coded notes, with my reading the full context of these data points again, in the form of transcripts or diary entries, when assembly of findings began. As shall become immediately clear, the narrative-oriented style of analysis (Merrill and West 2009), and ‘discussional’ form of theory presentation (Glaser and Strauss 2009) led to my constructing findings, and giving theoretical interpretations around significant amounts of quotations, which really allow the narratives and ‘realities’ of respondents to show through in the text. These quotations were then integrated into the theoretical discussion by combining them with my own observations and interpretations, as well as reference to documentary data sources that enhance the analyses and discussion, again following the grounded theory methodology (Glaser and Strauss 1967). As such, the coming findings can be viewed as a “working out” of theory, which heavily features ‘voice’, ‘narrative’ and ‘biography’ as tools through which the social world explored can be best understood. In following this ‘discussional form’ to the presentation of data, it is believed the goal of ‘thick description’ (Geertz 1973) will be achieved, allowing the reader a deep understanding of the context from which the theory posited by this research emerged, and was constructed.

Chapter Conclusion

This concludes the overview of the methods employed in the creation of this thesis. As this chapter has shown, a number of methods of qualitative data collection, both observational and based on soliciting and

analysing respondents' personal narratives and interpretations, were employed to ensure this work is as in-depth, and representative of the 'realities' experienced in the field as possible. Following a 'grounded theory' approach to the generation of theory from data, collected through ethnographic means drawn from the 'Chicago school', and using 'voice' as an analytical tool, this work aims to give an immersive account of the cultural environment of the gym, offering the 'thick description' through which the theory presented can be truly understood. Although some possible limitations to the findings of the thesis have been identified, including elements of 'hidden ethnography' (Blackman 2007), and issues relating to researcher positionality, this chapter gives the reader sufficient detail on where the gaps in this work are, in the hopes of minimising the extent to which these detract from the findings presented.

Further comment on methods shall be offered at times throughout where contextually appropriate, and shall be addressed again in the thesis conclusion, where recommendations for future research shall be offered (chapter eight). For now, however, this thesis shall turn to the findings of this research, beginning with an exploration of the extent to which PIEDs can be said to be 'normalised', following the framework of Parker *et al.* (1998).

3 The ‘Normalisation’ of Performance and Image Enhancing Drug Use

Introduction

Parker *et al.* (1998) in a seminal piece discussed the increasing 'normalisation' of recreational drug use in England, through reference to a longitudinal study conducted in North-West England following a cohort of teenagers into adulthood, determining the rates at which those surveyed partook in drug use, were offered drugs, and had tolerant attitudes towards drug use indicated an increasing normalisation within British (youth) society. As the use of performance and image enhancing drugs becomes ever more prominent in society (Bleeker 2014; BBC 25.02.2015; Guardian 19.06.2015; Times 19.08.2017), it is worth considering whether anabolic-androgenic steroids and other PIEDs could be becoming 'normalised' in the way recreational drugs such as cannabis were during the 1990s, as Parker *et al.* (1998) document.

This chapter shall therefore apply the framework of Parker *et al.* (1998;2002) to PIEDs, using the responses of those surveyed in qualitative interviewing, and recorded in the researcher's field diary, to measure perceived levels of normalisation, according to the standards set out by Parker *et al.* (1998;2002). As such, this chapter shall first look at matters of access to, and availability of PIEDs, with reference both to the traditional 'offline' market, primarily located within gyms (Monaghan 2001), and the emerging online market, which has previously been researched with regards to the availability of recreational drugs (Van Hout and Bingham 2013; Power 2014), and is rapidly becoming a primary source for those interested in acquiring PIEDs (Evans-Brown *et al.* 2012; Coomber *et al.* 2015).

Following this, the chapter shall discuss drug-trying rates, focussing as Parker *et al.* (1998) did on use amongst adolescents and young adults, as this is likely to be more indicative of a growing 'normalisation', especially when comparisons can be made to previous generations. The chapter shall then explore evidence of recent and regular drug use amongst participants, which shall determine whether or not use itself has become normalised, or whether increased availability and access has simply led to higher rates of *trying* compounds, without regular use necessarily following.

Finally, the chapter shall investigate the social and cultural accommodation of PIED use, exploring the acceptability of use within gym subcultures from the perspective of non-users, in addition to reflecting on the possible rise of PIEDs in mainstream culture, and the effects this may have had on the acceptability of use of these compounds. The chapter shall finally seek to conclude whether or not PIED use appears to have undergone the same process of *normalisation* as Parker *et al.* (1998;2002) observed for many 'recreational' drugs, leading in to the in-depth discussions of this topic to follow.

Access and Availability

Parker *et al.* (1998) suggest ease of access to, and availability of drugs, is a requirement without which normalisation cannot develop. Their research demonstrated quantitatively how the availability of recreational drugs increased in the decades prior to the study, and found that the vast majority of adolescents surveyed had access to at least one type of drug, normally purchased through a friend or friend-of-friend, in what is often termed 'social supply' (Coomber and Turnball 2007; Belakova and Vaccaro 2013) or 'minimally commercial supply' (Moyle 2013; Coomber and Moyle 2014).

Previous literature relating to the availability of PIEDs, most notably Monaghan (2001), indicates that within certain subcultures, the acquisition of PIEDs, primarily though not limited to steroids, was relatively simple, and these drugs were considered to be widely available amongst bodybuilders, and other core user groups, perhaps mirroring the experiences of dance club enthusiasts with stimulant drugs, as seen in Parker *et al.* (1998;2002), Measham *et al.* (2001), and Taylor and Potter (2013).

Outside of such subcultures, however, research into access and availability of PIEDs has been more equivocal, with little qualitative data available relating to perceptions of ease of access from the perspective of non-bodybuilding, or non-athlete individuals (Coomber *et al.* 2015*i*). The qualitative responses uncovered in this research, along with recent quantitative analyses by Bates and McVeigh (2016), therefore give perhaps some of the first indications of the true availability of PIEDs in ordinary gym environments, and how accessible such compounds are to those excluded from the 'elite' or 'hardcore' groups with which they have in the past been associated (and studied).

Availability In-Gym

One of the primary sources for acquiring PIEDs has for many years been within gyms, or gym environments (Monaghan 2001; Evans 1997; Coomber *et al.* 2015*i*). Such gym environments lend themselves to the supply of (illicit) substances regularly utilised by the populations which frequent them, and parallels can be seen between this type of environment-based selling, and that seen in dance clubs (Taylor and Potter 2013), or in cannabis supply in university halls of residence (Moyle 2013; Coomber and Moyle 2014), where sellers can exploit their access to a ready-made customer base of friends and acquaintances, through which drugs can easily and discreetly be distributed (Moyle 2013). Gyms can

typically be divided into two types: 'hardcore' gyms, such as bodybuilding or powerlifting-specific gyms, and 'commercial' gyms, such as fitness centres and leisure centres. It is worth exploring these separately, as their clientele tend to be similarly divided between 'competitive' trainers in the case of the former, and more image-focussed in the case of the latter.

'Hardcore' Gyms

Whilst 'hardcore' gyms have been home to PIED users and suppliers for some decades (Evans 1997; Monaghan 2001), and are therefore unlikely to be indicative of any trend towards normalisation when taken in isolation, it is nonetheless of note that these environments still maintain their reputation as spaces in which PIEDs can be accessed with ease, as indicated by the following respondent's description of how he first came to acquire PIEDs:

"I just spoke to someone at the gym, found someone that was selling, and... gave him some money... just sort of 'what have you got? How much? I'll have that and that'." 'Jim', powerlifter (interview)

Jim was training in a small, independent bodybuilding/powerlifting gym, and here documents the ease with which those who participate in such subcultures can access these substances that are so endemic to them. As a competitive powerlifter, Jim had little difficulty finding through word-of-mouth an individual willing to supply him, and the transaction was conducted on the spot, without hassle. This comment is representative within the sample of those who purchased the more common forms of PIEDs within a 'hardcore' gym environment, and certainly indicates that access in such spaces has not decreased since the time of Monaghan's (2001) research.

Respondents did however offer some indication that acquisition of PIEDs is not always as simple as might be inferred from Monaghan's (2001) findings. More than one respondent from a 'hardcore' gym noted how even in these spaces, access to certain forms of PIEDs could be difficult, and this could perhaps indicate that ease of access cannot necessarily be generalised across the market:

"[Boldenone is] rare as fuck... it's quite hard to get." 'Mariusz', wrestler (interview)

"I kinda want to get on 'bold', but at the same time it's difficult [to find a source]." 'Rich', powerlifter (interview)

These comments both relate to the steroid 'boldenone', which although popular amongst competitive

powerlifters, had a reputation for being fairly hard to access. Whilst this demonstrates PIEDs are not universally available with ease even within 'hardcore' gym environments, however, these responses do not necessarily indicate that access to and availability of this compound does not meet the requirements outlined for 'normalisation' (Parker *et al.* 1998;2002). Principally, this can be demonstrated from the fact that in spite of the difficulties stated regarding sourcing this particular PIED, both men were ultimately successful in finding sources, simply having to look harder than when purchasing the more common PIEDs.

Indeed, it is clear that a difficulty in obtaining certain PIEDs does not necessarily indicate a move away from normalisation, and a suitable comparison in the realm of recreational drug use could be drawn between, for instance, the ease with which Parker *et al.*'s (1998) respondents could access cannabis relative to MDMA. Although one was more readily available than the other, access to both was ultimately found to be increasing. This suggests that even with the difficulties the respondents above cited in sourcing specific PIEDs, access and thus 'normalisation' may nonetheless be increasing within these 'hardcore' spaces.

It is therefore noteworthy that in Monaghan (2001), boldenone did not even make the list of the 17 most popular PIEDs used by respondents (p.98)), in contrast to its being the second most popular drug utilised by sport-oriented users in the present research. This is likely due to changing trends in which compounds are fashionable, or considered 'superior' within respective subcultures (see chapter six), but it is interesting that powerlifter Rich discussed being able to access 'deca' if boldenone was not available, but chose not to because it had worse side-effects ('Rich', interview), since deca-durabolin was amongst the most popular PIEDs used by Monaghan's (2001:98) respondents.

This suggests that accessing PIEDs within 'hardcore' gyms may indeed be easier today, if the range of available substances is increasing, altering patterns of use. Indeed, (former) PIED-supplier Jim confirmed that 'boldenone' was harder to access was because it is by necessity shipped in liquid form, whereas most of the product he (and others) sold – including 'deca-durabolin' – was brought into the country in powder form, thus boldenone was more likely to be seized by HMRC (Field Diary 03.06.2015; See Llewellyn and Tober 2010). The fact that such a "*hard to get*" ('Mariusz', interview) product was nonetheless popular amongst users might therefore evidence increasing availability of this drug, as it shifts in status from rarely-used exotic (Monaghan 2001) to awkward-to-acquire 'staple' (as Measham *et al.* 2001 document for cocaine).

The requirement for access and availability would therefore seem to be satisfied within the context of 'hardcore' bodybuilding and powerlifting gyms, as previous research has indicated to be the case (Evans 1997; Monaghan 2001). However, in order to assess the extent to which a cultural 'normalisation' of PIEDs is underway, it is necessary to look beyond the subcultures long-associated with use found in 'hardcore' spaces, to groups not formerly associated with these substances, which are now beginning to engage in such use. It is therefore necessary to discuss the availability of PIEDs in 'commercial' gym environments, where those who are not a part of 'hardcore' user subcultures may be found.

Commercial Gyms

Whilst previous research has mostly looked at PIED use within subcultures such as bodybuilding (Lenehan *et al.* 1996; Evans 1997; Monaghan 2001), or professional and semi-professional sports (Voy 1991; Millar 1996), this research aims additionally to explore the prevalence of use in more 'commercial' gym environments, which are not so dominated by those dedicated to sporting endeavours or bodybuilding, and are thus more indicative of changes in attitudes signifying the occurrence of a culture-wide 'normalisation'. Spread of drug use from a small, select group to a larger, more culturally-representative (or 'mainstream') group follows the pattern laid out by Parker *et al.* (1998;2002) relating to the normalisation of recreational drug use, and thus findings which indicate PIED use is becoming more prevalent in 'commercial' gym environments would strongly support the thesis that PIED use is becoming 'normalised'.

"You wanna know about steroids? You could ask ninety percent of the people in here. They're all on something." 'Big Steve', bodybuilder (field interview).

This quote from a 'hardcore' bodybuilder who trains in a commercial-type gym is a fair representation of the perceptions of many respondents. Being familiar with PIEDs, and indicators of use, Steve, whilst clearly exaggerating nonetheless notes the large proportion of non-competitive individuals within his gym that are "*on something*". This belief that PIED use is prevalent in 'commercial' gyms was held by many, and almost every respondent who trained or worked in such a gym noted this trend:

"I would say probably three-quarters of the gym know which members deal [PIEDs], and which members don't... It's a common conversation in the changing room after a workout."
'Mark', personal trainer (interview)

The respondent here is a personal trainer (PT) in a commercial gym, who feels PIED use is prevalent, and knowledge of how to access PIEDs widespread. With an estimated "*three-quarters*" of individuals aware of who in the gym sells PIEDs, access is clearly relatively simple even outside of subcultures previously associated with use, such as powerlifters, and suggests a rising availability of PIEDs in non-competitive environments.

As with 'hardcore' gyms, discussions with the PT cited, as well as gym members ('Josh'), owners ('Stephen') and others ('Robert'), suggest many sales in commercial-type gyms are member-to-member, with suppliers being fairly well known by those inclined to investigate where one might acquire steroids. As Coomber *et al.* (2015ii) note, "social supply" of this type can be considered "the 'other side' of the history of normalisation", and with such member-to-member supply common in commercial gyms, one might

suggest that this qualification for 'normalisation' is clearly met.

Commercial gyms present a further opportunity for supply not seen in 'hardcore' gyms, suggesting a possible even greater degree of 'normalisation' of supply (Coomber *et al.* 2015*ii*) within these environments, in the form of personal trainers, who as with Coomber and Moyle's (2014) hall of residence based cannabis suppliers have access to a ready-made customer base. If PTs in commercial gyms are routinely seen as a means of accessing PIEDs by those not involved in 'competitive' user subcultures, this would therefore demonstrate a further trend towards broader normalisation.

Personal Trainers

Personal Trainers may exploit their position within gyms as obvious figures to whom one might speak about areas around training, such as supplementation, and by extension PIEDs, and this certainly appears to be the case within some gyms:

"Prevalence-wise, I would say fifty percent of the gym's trainers... were taking some sort of performance-enhancing drug... there have [recently] been two trainers that have been found out, for selling performance-enhancing drugs to their clients... within the gym's boundaries." 'Mark', personal trainer (interview)

Mark describes how some trainers are known to have been selling to clients within the boundaries of the gym, and thus indicates a point of access which extends to those not nominally submerged in a subculture where one would expect to find PIEDs. Whilst those in 'hardcore' gyms tended not to require access through personal trainers, as indicated above, in 'commercial' gyms it seems PTs are frequently seen as an access point, and will sometimes supply clients with PIEDs on request. This makes sense, given such gyms are more likely to attract those distant from 'competitive' subcultures wherein PIED use is considered 'part and parcel' of routine training, and PTs are obvious figures to whom one without access elsewhere might turn in such an environment:

Elaborating on this theme, Mark offers insight into the ways personal trainers are selected by such clients as a means of supplying illicit performance-enhancers:

"I have... known of [gym members] that will [pay for] a trainer... just so they can get that inside information, that connection to the performance-enhancing drugs which they're after." 'Mark', personal trainer (interview)

Although the gym's owner ostensibly did not allow trainers to sell, or even use PIEDs on the premises, and would dismiss them if he discovered they were doing so, members of staff suggested that in practice this was not enforced, noting that even when one trainer was caught with needles and PIEDs, he was allowed to continue working, and was believed only to have been warned not to sell on-premises (field diary 08.06.2015). This perhaps indicates a trend in the culture towards an acceptance of PIEDs, which shall be discussed further shortly. For the time being, these findings suffice to indicate that access to PIEDs is prevalent even in the types of gym environment not previously associated with them, and demonstrate that even those with no involvement in 'competitive' subcultures can access PIEDs with relative ease, provided they ask around, or hire the right personal trainer. As Mark notes, it isn't too hard to identify from their physiques which trainers are most likely to have such connections (interview).

Availability Online

In addition to the apparent increase in access to PIEDs within commercial gyms, which allows those not involved in 'competitive' subcultures to acquire PIEDs more readily than ever, increasingly access to almost all types of drugs is becoming easier for such 'outsiders', owing to the growth of illicit and quasi-legal markets on the internet (Evans-Brown *et al.* 2012; Van Hout and Bingham 2013).

Although the purchase of PIEDs over the internet has been investigated by Evans-Brown *et al.* (2012), who demonstrated the increased availability of these substances for those who did not previously have access within gym environments, it is interesting to consider this area of supply in relation to individuals who have not been selected for study specifically based on their online presence, allowing differences in patterns of acquisition to be drawn. In doing so, this research contributes further to understanding how PIEDs are accessed online, and their availability.

Sole Source

Evans-Brown *et al.* (2012) reference individuals who purchase diet pills and similar products over the internet, where this is their sole means of purchasing PIEDs. Although no such individuals were interviewed in the course of this research, respondents were aware of such persons training within local gyms:

"[A gym member had] been buying this 'fat burner' off the internet, and had been using it for probably over a year. Wasn't really aware of the risks... My point being: it isn't just bodybuilders, and young men. There is the odd case, because on the internet... it's just so easy to get." 'Stephen', gym owner (interview)

Stephen here discusses a middle-aged female client who bought 'clenbuterol' over the internet, unbeknownst to him, and was successful in losing a significant amount of weight using the product. Although this manner of sourcing is discussed in-depth by Evans-Brown *et al.* (2012), and already demonstrably shows the increase in availability of PIEDs offered by the internet, thus satisfying this element of 'normalisation of access', it is interesting to note in this instance what happened next, and how Stephen became aware that the individual in question had ordered and used this product:

"It became apparent that [she] was actually telling other gym members how she'd [lost so much weight]. So then, when we became aware of it, we were going 'what? She's telling people to get clenbuterol off the internet?'" 'Stephen', gym owner (interview)

This comment suggests further evidence for normalisation in a number of ways. In addition to the element of social acceptance it indicates (see below), the individual in question is spreading information about where online one can order PIEDs, to people in her gym who otherwise might not even be aware they can buy such products over the internet. Such discussions are indicative of the ways in which connections to sources can spread within subcultural environments, whether amongst 'hardcore' gym users, or simply older women seeking to lose fat. Indeed, Evans-Brown *et al.* (2012) note there are forums wherein people instruct others interested in acquiring PIEDs on where to go (online), and what to get, and the example above confirms their findings regarding this area of 'access' extend into the 'real world'.

Dual Sourcing

Ordering product for oneself solely from the internet was not, however, the norm for respondents in this research, who unlike Evans-Brown *et al.*'s (2012) subjects tended to be young males already involved in some culture of use, be it 'competitive', or 'image-oriented'. It is therefore interesting to note the phenomenon of 'dual sourcing', wherein individuals bought PIEDs both online, and in the local market, often simply from wherever was most convenient at the time, indicating an increasing normalisation of multiple means of access amongst users:

"I found one website, one of my mates recommended me one he was getting his from... then a couple of times I got something from people in the gym, like if I couldn't find something on the website or whatever." 'Mariusz', wrestler (interview)

The above indicates the attitude of the majority of 'dual sourcing' individuals surveyed, in that Mariusz has a preference for buying via one means, but if the product he wishes to purchase is unavailable, for instance, is content to look elsewhere. Mariusz demonstrates the willingness of many who source online to look 'offline' when convenient, but the reverse was also commonplace amongst respondents:

"there's a guy on a forum I've emailed about [sourcing product], just asking him whether he's got any advice on what's good in England, who to order from." 'Rich', powerlifter (interview)

Rich buys almost exclusively through a friend who is a supplier, yet in this instance, when unable to acquire the specific compound he desired, chose to ask online. In each of these cases, neither party had any strong hesitations about buying through a means they were unused to, with Mariusz being entirely comfortable asking people whom he knew to be sellers in his local gym whether they could supply him, and Rich having a contact he could email asking for an online source already lined up, despite not having ordered PIEDs from the internet before. There indeed appears to be a level of fluidity in alternating between sources amongst those who are knowledgeable and significantly involved in the PIED 'scene', and although the two individuals cited come from 'hardcore' user subcultures, there were image-focussed users who similarly had the option of acquiring PIEDs through multiple sources ('Eddie', interview). This again indicates a level of availability that could not have existed prior to the growth of internet access, and demonstrates how individuals can now access compounds previously unavailable.

In all instances, the response of those who purchased PIEDs online indicate the simplicity, and how easily-acquired PIEDs are through these means, even without the technical knowledge that is perhaps required to access 'harder' drugs, which might require buyers use the 'deep web' (Van Hout and Bingham 2013), as opposed to the 'surface web' sites respondents used to access PIEDs:

"It's insane how easy it is... It's just an online shop. Just add product... pay through PayPal... I was shocked how easy it was, to be honest." 'Mariusz', wrestler (interview)

"I bought them online... I done a lot of research... trawling... bodybuilding forums, you can get a lot of information from there: where to find good stuff, they normally recommend [websites]... it's all sold as 'research chemicals'." 'Martin', powerlifter (interview)

"Actually [the PIEDs are sourced] off Facebook... I can give you the name on Facebook, and anyone can just add them." 'Eddie', gym user (interview)

The prices paid by respondents who sourced online were generally similar to those paid by respondents who bought locally ('Eddie', interview; 'Mariusz', interview), contrasting somewhat with the experiences and perceptions of respondents in Coomber *et al.* (2015*i*), who generally regarded the online market as more expensive, and less reliable. Since Coomber *et al.*'s (2015*i*) respondents were mostly found through speaking to owners of 'hardcore' gyms, then 'snowballing' contacts, it seems likely these respondents had more access to 'traditional' in-gym markets, and thus had not the need to properly investigate online sourcing, as some individuals surveyed here did. It seems, however, that with minimal investment in research, it is possible to access PIEDs conveniently, and cheaply via the internet, and the qualitative

responses of interviewees does not suggest these are of any lower quality than that available 'offline', with several respondents 'dual sourcing', and thus being aware of the qualities of product available through both means.

PIEDs can therefore be demonstrably said to be available and accessible to anyone who is prepared to invest the time in researching them online, and taken in conjunction with the concept of 'dual sourcing', shows that a broad range of PIEDs can be easily accessed by anyone. Even for those without technical savvy, or gym-based contacts, it is clear that access to PIEDs was still possible, with online sources and personal trainers willing to supply apparently readily available.

'Offline', Non-Gym-Based Supply

Even for those without traditional gym-based contacts, it was nonetheless clear that local access was possible through other means. Gym-goer Simon, for instance, asked a 'recreational' drug supplier to acquire PIEDs for him, a request the individual was easily able to fulfil ('Simon', interview). Similarly, despite having access elsewhere himself, powerlifter Martin nonetheless noted he knew individuals who accessed PIEDs through such means:

"As far as I know, or I'm aware, there aren't many ['drug dealers'] like 'ah no, I only do this', cos if you say 'can you get this?', they say 'yeah, all right'." 'Martin', powerlifter (interview)

In addition to access through sellers of illicit 'club drugs', some respondents also noted that PIEDs could be sourced through doormen, and those in similar roles, who might need them in their work (see Monaghan 2002):

"I started working the doors when I was seventeen, and the other guys were like 'you need to get bigger, try some of this'. So I started using it then just for the job." 'Ian', powerlifter/doorman (field diary 14.03.2015)

Although only three users in this study bought PIEDs in this manner, several made comments indicating they were aware that sourcing through such means was another route of access, and again this demonstrates the multiple ways in which individuals can acquire PIEDs, without being involved with PIED-using subcultures, or having sufficient knowledge to buy them online. Such examples serve to demonstrate how a form of 'social supply' can link an individual with no prior access to PIEDs with a 'reliable' source:

I was in the barber's the other day and he was saying 'you look like you lift, you want any of this?... I can get testosterone, deca, you name it'. I was like that [mimes shocked expression]" 'Shaun', gym-user (field diary 31.10.2016).

Shaun is not a PIED user, and did not even suggest he was interested in purchasing PIEDs, but clearly the barber saw an opportunity for a sale, undoubtedly having met young men Shaun's age previously who were looking for a source. Such supply is generally considered rare for most illicit drugs, which tend to operate in "closed markets", for reasons of security (Curtis and Wendel 2007; Coomber 2010). This again points to some cultural accommodation as well as increased access, and although there is no evidence such means of supply are growing, as there is for online supply, or supply in commercial gyms, such 'supply through association' is not insignificant, as it again demonstrates the range of means by which an individual can access these substances, and as Coomber *et al.* (2015*ii*) note, an expanding normalisation in the realm of supply can be taken as indicative of normalisation more broadly.

Shifting Patterns in Drug Supply

Building on this concept of a normalisation in patterns of supply (Coomber *et al.* 2015*ii*), it is worth considering finally the nature in which supply has changed, which will naturally reflect a shift in the ways in which drugs are accessed. Whilst 'social supply' has long existed for PIEDs in 'hardcore' user subcultures (Fussel 1991; Monaghan 2001; Evans 1997), meaning Coomber *et al.*'s (2015*ii*) definition for 'normalisation of supply' was met within these group environments some time ago, it is significant that the two commercial suppliers interviewed in this study both noted how the purchase of drugs for the purposes of image-enhancement, from persons not involved in such competitive subcultures, was becoming increasingly prevalent:

"'Gym rat' types that want to look good for summer will probably want anadrol, winstrol, maybe trenbolone, something like that, so if it's coming up to summer [I'll stock more of] that sort of thing." 'Jim', powerlifter/commercial supplier (interview)

LT: *So prevalence-wise, would you say you sell mostly to powerlifters and stuff, or is it more people who want to look good for summer, that sort of thing?*
TM: *Oh, it's all about how you look now, everyone wants to look like the Kardashians, or whoever... people want that life, that look.*
'Tyson Maxwell', commercial supplier (field interview 14.05.2016)

With this shift in supply at the commercial level moving increasingly towards image-oriented use, in contrast with historic norms, it is clear that some element of image-focussed use is becoming increasingly normalised, being now more common than the sport-oriented use that dominated previously (Bates and McVeigh 2016; c.f. Evans 1997; Monaghan 2001). In addition, with hedonistically-motivated individuals engaged in a subculture in which "*they all supply each other*" ('Pete', interview), it is clear that the

requirements for normalisation of 'social supply' set out by Coomber et al. (2015*ii*) are satisfied.

It would therefore appear the requirements for normalisation of 'access' and 'availability' have been satisfied, with both clearly widespread, and growing. This chapter shall therefore turn to the next requirement which Parker *et al.* (1998;2002) suggest must be fulfilled in order for 'normalisation' to be said to have occurred: that of increased drug trying rates in adolescence, and young adulthood.

Drug Trying Rates in Adolescence and Young Adulthood

Parker *et al.*'s (1998) longitudinal study focussed on youths and adolescents, as this group is the most representative of rising trends in drug consumption, and other areas wherein societal attitudes are shifting. Since youth are the most receptive to changing cultural norms, it makes sense for any investigation into the 'normalisation' of some cultural element to focus on this group.

Whilst teenage males have used PIEDs in highschool and college sporting leagues for decades (Waddington 2000), with prevalence of use in this age bracket being notable even in the early-1990s (Williamson 1993)¹², this pattern of use from a young age is now present in a broader range of subcultural groups, with numerous interviewees identifying teenagers who train for non-sporting purposes using PIEDs:

"I'd say it goes down to as young as 16. [And] I would say from the age of 18-22... they're all thinking about it. They're all talking about it." 'Mark', personal trainer (interview)

"I think so many [teenagers] do it now, I think the growth in steroid use has been massive... [that's] just sort of... what I witness." 'Stephen', gym owner (interview)

These quotes indicate an awareness amongst respondents of an emerging culture wherein large numbers of young men are either trying, or considering using PIEDs. Indeed, Mark noted in interview that just in his time working as a PT, he had noticed a shift towards use at an ever-younger age, with use amongst teenage males seemingly becoming normalised, and casually discussed ('Mark', interview).

Throughout the research, multiple references were made by respondents to the "workout culture", and "lad culture" now popular amongst teenage and 20-something British males, and with the number of young men who weight-train in gyms increasing significantly in recent years, it is perhaps not surprising that steroid use amongst young males has seemingly become more prevalent, as reported by numerous sources (Guardian 19.06.2015; BBC 25.02.2015; Bleeker 2014). Qualitative findings suggest such analyses are accurate, with what this research terms 'hedonic' users now an increasing presence in many commercial gyms:

"There was about... five of us [training together], and there was always two in the group that were slightly more... bolshie... and they were obviously the two that started [using PIEDs] first... and then eventually all of them, and then eventually me." 'Josh', gym user (interview)

PR: [Young guys want to] go out and have a good time, and eat kebabs, and have beers and stuff, and yet [still be] ripped...

LT: [And] steroid use is all linked to that?

PR: Yeah, yeah, course it is. It's image, innit?

'Pete Robinson', "lad culture" member (interview 20.02.2016)

Although the first respondent is relating an experience from approximately ten years ago, his comments nonetheless appear representative of the experiences of young users today, with Josh elsewhere noting a large number of young men, aged "18/19" now ask him questions regarding use of PIEDs ('Josh', interview). As Pete notes of his friendship group, this culture of use is largely fuelled by a desire to live an hedonic lifestyle, of which a significant factor is one's image, particularly the muscularity of the body. With gym owners, personal trainers, and other gym-goers all acknowledging the increasing prevalence of such individuals in recent years, it is clear there is much PIED use amongst adolescents.

This evidence of use amongst young men is interesting to contrast with the experiences of older respondents, who if they were users claimed not to have commenced use until they had reached some sufficient level in sport (reflecting both the narrower range of subcultures associated with use then, and suggesting later age when commencing use), and if they were not users commented on how much rarer PIED use, or at least public acknowledgement of it was when they were younger:

If you've been training since you were 16, and you've won a couple of regional comps... and you're looking to do the Britain's [bodybuilding championship], then maybe you should get on [PIEDs in your early-20s]. But even then..." 'Big Steve', 'old school' bodybuilder (field interview)

"If I go back to when I was 16: I was a footballer. No-one took steroids... It just didn't happen. Now I'm in my forties, so sort of 25 years [on]; I think they're very prevalent in that age [range], sort of 16-21. And they're not [even] playing sports." 'Stephen', gym owner (interview)

From these comments, it is clear an increase in drug-trying amongst adolescents appears to be occurring. This shall be evidenced further in the section regarding 'social accommodation', which heavily ties in with this apparently growing culture of PIED use amongst young male gym-goers. First, however, it is important to address the issue of 'recent and regular drug use', since instances of mere one-off 'trying' of drugs cannot be considered indicative of any real trend towards 'normalisation', as this thesis seeks to explore.

Recent and Regular Drug Use

In contrast to many 'recreational' drugs (such as MDMA or cocaine), where a single dose taken every few weeks could be considered 'regular' use, steroids and other PIEDs are taken in set, routine amounts, and thus *any* use, beyond a 'failed' or 'aborted' cycle, is by necessity 'regular' by the standards set out by Parker *et al.* (1998;2002). In order to identify 'regular' use of PIEDs, therefore, it is necessary to alter the definition to 'use of multiple cycles', or 'continuous use without cycling-off', to accommodate this fact of use (see chapter six for an explanation of 'cycling'). Similarly, the nature of steroids makes measures such as 'used within the past month' meaningless, since most heavy users will have a period in which they 'cycle off', and go without for a planned, extended period of weeks. Likewise, user types such as 'opportunistic users' discussed by Parker *et al.* (1998) cannot realistically be applied to PIED-users, since although an individual might take advantage of a particular product being available for a cycle, none use 'opportunistically' in the sense that recreational drugs users do.

In effect, therefore, this qualification might not be said to apply in whole to PIED users, in so far as establishing an increase in normalisation is concerned, since with steroids, and indeed most other commonly-used PIEDs (see Bates and McVeigh 2016), individuals can clearly be defined as either 'users' or 'non-users', without any real categories in-between (although 'former user' and 'those in transition' (Measham *et al.* 2001) are still applicable). Nonetheless, some responses regarding use still serve to illustrate patterns of 'regular' use in the realm of PIEDs:

"[My supplier] moved away, so... I stopped using [PIEDs]... [But] recently, I've been having problems... in the gym. And I've been looking around sort of online now." 'Rich', powerlifter (interview)

The respondent here had previously used both steroids and other PIEDs, and was a fairly experienced user, though commented that he trained "*more natural*" now ('Rich', interview). Following some probing, it seems that once his supplier moved away, Rich had become a 'former user', until his training began to suffer, some significant time later. At that point, he began searching for other PIED sources online, since he wanted to correct his training problems (working through injury), but did not wish to access local labs he did not trust (see chapter six). Rich was not the only respondent who had taken an extended break from PIED use, with his former supplier Jim noting similarly he "*[hadn't] used in ages*" (field diary 09.10.2015). Clearly, there are cases of individuals who are definitely 'users' taking extended breaks from 'regular' use, and merely adapting what they take to how they are training, and the ease with which they can source product.

Perhaps the most significant example of an extended sabbatical such as this is the case of gym-user Josh,

who took several years out from using PIEDs, having used them frequently and carelessly as a young man:

[I'm now] down more sort of the... I can't say 'natural' route, because obviously... I have done stuff... so I can't say I'm natural... But I'm not on any hardcore sort of steroid [now]."
‘Josh’, gym user (interview)

This quote encapsulates the view held by many gym-goers, whether or not they use PIEDs, that an individual who has used PIEDs is no longer considered 'natural', and cannot consider themselves a 'non-user' again after this point. Interestingly, this perhaps argues against the principle of 'normalisation', as it shows there is still some stigma attached to PIED use, as shall be addressed in the following section regarding 'social accommodation'. For the time being, this quote is useful in that it shows how Josh, despite taking years out from using PIEDs, nonetheless still considered himself to be a 'user', demonstrating just how infrequently these drugs need be used for individuals to class themselves (and be classed by their peers) as 'users'. The majority of respondents who had used PIEDs did so far more frequently than Josh, meanwhile, and few made statements of intent to come off long-term.

It can therefore be said that amongst users, there is a definite trend towards long-term use, and in the majority of cases, this could be regarded as 'recent and regular'. Indeed, observers noted that amongst 'hedonic' members of the so-called "lad culture", use was frequent in the run-up to "*summer in Ibiza*", then would tailor off, only for the individuals to "*cycle twice as hard as what [they] did last time... just to get [their] size back*" before the next event for which they would need to be 'in-shape' ('Pete', interview).

Regarding 'normalisation', therefore, the requirement for recent and regular use amongst those who have 'tried' PIEDs would appear to be almost universal amongst respondents, with observers even noticing a distinct pattern of gym-goers "*blowing up*" then "*shrinking down*" when training, as they cycle on, then off steroids repeatedly ('Big Steve', field interview).

Social Accommodation of Sensible Drug Use

Parker *et al.* (1998) suggest the extent to which sensible use of drugs is accommodated by non-users is an essential measure in determining normalisation, since 'normalisation' frames drug use not as 'deviance' linked to subcultures, but suggests it has become part of mainstream youth culture. It is therefore necessary, to establish whether normalisation has occurred, to address the opinions of non-users regarding these substances.

As noted, there remains a stigma attached to PIED use from certain groups within gym and training-type environments, and on occasion non-using individuals made remarks regarding how they viewed those who

used, demonstrating a lack of accommodation of their behaviour:

"I don't want to be up against cheaters." 'Matt', gym user (field diary 14.08.2015)

The above response was elicited during a conversation regarding an upcoming powerlifting event, in which the respondent was considering competing. The respondent asked me (as a former competitive powerlifter) whether the federation hosting the event was drug tested. When I confirmed that it was, Matt stated he was glad to hear this, and gave the response quoted. This demonstrates how for some people within gym environments, the use of PIEDs, even in a sport or federation that *allows* such use, is still frowned upon, with those who do so considered "*cheaters*". This contrasts with the opinions of users, who comment that use cannot be immoral if there is no rule against it:

"Nothing I do is tested, so... I'm not breaking any rules of anything." 'Mariusz', wrestler/powerlifter (interview).

This contrast of opinions demonstrates the ways in which social accommodation has not wholly been achieved amongst those who do not themselves use, and it is not uncommon to hear individuals, particularly sportspersons, discussing PIEDs and PIED-users in this manner. Whilst this might suggest there is not necessarily social accommodation of sensible use of PIEDs, however, several other non-users gave responses indicating a certain acceptance of use from the fringes of using cultures:

"People play rugby and they damage themselves... people kickbox and they damage themselves, so if these people want to take steroids... who are you... to tell them not to?"
'Stephen', gym owner (interview)

"I mean, it's stupid: things like cigarettes are legal and alcohol's legal, but then [steroids are] illegal." 'Johnny', gym user (interview)

The first quote comes from the owner of a commercial-type gym, who previously ran a strict "*no steroids*" policy on his premises. He states that a conversation with a member who was a serving police officer, and it transpired steroid user, had altered his opinion regarding use of PIEDs amongst his members, and the above quote is his paraphrasing of the argument that convinced him to see use differently. Stephen was not the only individual to make such remarks in the course of interviewing, and it appears there was a growing cultural acceptance from non-users involved elsewhere in the 'gym culture'. Also interesting to note is that the respondent, Stephen, was very anti-steroid when he first began managing a gym, but began to "*mellow*" following exposure to the culture, as Parker *et al.* (1998) suggest can be the case with youngsters exposed to drug use. It seems plausible, therefore, that even those who see PIED use as "*cheating*", or somehow immoral, will change their minds after sufficient exposure to use.

The second quote comes from an individual on the fringes of a steroid-using subculture, who has previously used legal 'prohormones' (Superdrol), but never used an illicit PIED. The comparison made to alcohol and tobacco is a common one, not dissimilar to the comparison with other forms of risk given by Stephen, and recurred in several interviews, as well as in the sociological literature (Monaghan 2001; Coomber 2013; Waddington 2000). The extent to which Johnny can be considered a 'non-user' is perhaps questionable, since he had used legal, over-the-counter hormones, so could perhaps be considered a user of 'PIEDs' in the most general terms. With the rise in use of protein powders, creatine supplements and energy drinks amongst the young, however, there can be some difficulty in defining where one moves from 'non-user' into the territory of 'user' when not framed by a paradigm of 'legal' versus 'illegal' PIEDs:

"I think a lot of the young men who are using steroids today, if we take that sort of age of 19, 20, 21... I don't think they see it as really any different to buying a supplement off a shelf." 'Stephen', gym owner (interview)

This parallels what was said above regarding drug trying rates: Within the 'workout culture', it seems, when young men see their friends using, there is little condemnation, and in fact a certain eagerness to partake in drug use. Multiple respondents commented on the young men they see who are entirely accepting of PIED use, even without being a part of a classic user subculture, such as bodybuilders. The opinions of these 'competitive' user groups shall be discussed shortly, as their take on the accommodation of use amongst the young is perhaps as significant as the opinions of non-users and those on the fringes, when one looks to determine the extent to which PIED use has become 'normalised'. First, it is interesting to note that several respondents drew parallels themselves between the normalisation of PIEDs, and cannabis:

"[PIED use is] kind of mainstream now... It's almost like pot was, when I was a kid... Having a joint was kind of 'slap your wrist'-type stuff, a bit like having a drink when you're underage... and I think that's the way gear's gone these days." 'Robert', sports physiotherapist (interview)

"Gear is the next weed." 'Mariusz', wrestler (interview)

Both respondents assert their belief that steroids are becoming normalised in the same manner cannabis has been, judging by what they see of the culture. Whilst Robert states this in relation to the number of young men using PIEDs without any particular concern they are doing something wrong, and notes how the authorities do not seem overly concerned by the use of these drugs either (outside of a professional sporting context), Mariusz went on to elucidate how the rise in acceptability is also in his mind linked to the increasing medicalisation of society, paralleling what Hoberman (2006) has said in relation to these drugs ('Mariusz', interview).

This comment indicates a level of familiarity with issues surrounding the use of PIEDs that suggests the

respondent has researched these, and indeed Mariusz confirmed he conducts a lot of research into PIEDs online (chapter five). This awareness of issues surrounding use, both practical and political, was widespread amongst 'competitive' users: those using for sport-specific purposes, rather than image. Indeed, even beyond those who had done specific research into the topic of PIEDs, generally online, almost every respondent surveyed, including those abstainers who were merely at the fringes of the scene, referenced at some point the documentary '*Bigger, Stronger, Faster*' (Bell 2008*i*), which tasked itself with addressing many of the myths surrounding steroid use, suggesting a degree of desire to be educated on this topic amongst gym-goers of all types.

This cultural growth in knowledge of drugs indeed mirrors that seen in cannabis, as discussed in Parker *et al.* (1998;2002), with reference to young cannabis users educating parents and older peers on facts related to cannabis consumption. In the case of PIEDs, it seems this education involves both individuals informing their non-using peers of facts they have uncovered during online research that support their arguments, as well as the spreading through word-of-mouth of this documentary, which addresses many of the same issues. With many non-users having seen the documentary, and accepting the pro-PIED arguments framed within ('Pete', interview), this suggests yet further levels of social accommodation of the use of these drugs.

The depiction of PIED use in '*Bigger, Stronger, Faster*', and the popularity of this film on the fringes of 'gym culture' also ties in with the concept of 'cultural accommodation', as identified by Parker *et al.* (1998), which shall be addressed shortly. However, it is first necessary to consider a final element of the social accommodation of acceptable drug use before progressing to the wider cultural context, and that is the concept of social criticism of drug *abuse*.

Criticism of Drug "Abuse"

Parker *et al.* (1998;2002) highlight that, in order for normalisation to be said to be occurring, only *sensible* drug use must be socially accommodated. Perhaps an important point to note here is how, in the case of PIEDs, drug *abuse* is strongly criticised by those within the using 'hardcore' subcultures, or on the fringes, and in many ways this perhaps further highlights how these drugs are accepted when used *sensibly*, with those who deviate from such use criticised by these groups (for parallels to recreational drug culture, see Coomber 1997*i*;2006*i*; Measham *et al.* 2001).

Several sport-oriented respondents commented on how those who abuse PIEDs either give all users "*a bad name*" ('Jim', interview), or how such people will become "*another statistic*" ('Mariusz', interview), again reflecting badly on PIED use. Users attempted to protect the image of their subcultures in this manner, by making plain that drug *abuse*, and not use, is the problem, and the harms cited by some to illustrate why PIEDs are bad only arise in cases where the drugs are misused. It could be said these users are

encouraging the normalisation of use, by making sensible use seem more acceptable through their criticisms of abuse.

Although this argument was frequently espoused by sport-focussed users, it was also repeated even by individuals who were not necessarily well-informed themselves:

"[my friend] was injecting testosterone every other day, and I kept telling him 'you're not meant to inject testosterone every other day... you're gonna kill yourself'. And then he was on it for about thirty-five weeks... and I said "look mate, the most you're meant to be on them is about twenty weeks, so you should probably come off." 'Simon', gym user (interview)

Simon here is critical of his friend, and makes the point of instructing him not to abuse the drug he is taking (testosterone). Whilst it could be suggested that he had his friend's health in mind above any interest in how his subculture or drugs are represented, it is still significant that Simon intervenes to prevent *abuse*, when he is a user of the substance himself. Although actual interventions such as this were not reported to be commonplace, there were a number of means through which the using subcultures undermined those who abuse PIEDs, either through verbally condemning such individuals, or in the case of sellers through proactive behaviour to reduce instances of misuse (chapter five).

These elements somewhat parallel the attitudes of bodybuilders in Monaghan (2001), where some respondents were critical of (particularly young) individuals who would 'abuse' PIEDs and give their sport a bad name as a consequence, especially in relation to the concept of "roid rage". This phenomenon shall be discussed in the next section, as a possible obstacle to cultural accommodation of PIEDs, though for now it is interesting that the defence of PIED use, and harsh criticism of abuse, can be demonstrably shown to have grown from only bodybuilders and serious subcultural groups as seen in Monaghan (2001), to even casual gym-goers such as Simon, above.

Interestingly, Simon might himself be considered an 'abuser', as shall later be explored, demonstrating how even those who do not use in the 'prescribed manner' (chapter five) nonetheless were often critical of those using in a more reckless manner than themselves. This phenomenon again feeds in to the concept of normalisation through social accommodation, as with the increase in ill-informed users generated by the expanding, hedonic "lad culture" ('Pete', interview), those who might once have been categorised as "abusers" by sport-oriented trainers (Monaghan 2001) are now sufficiently better-informed than this 'abusing' subculture to be able to advise, and condemn them when necessary.

It can therefore be said that, whilst some cultures of users do indeed 'abuse' PIEDs, such behaviour does not appear to have negatively affected the normalisation of drug use itself, and it is clear that PIEDs are increasingly accepted on the fringes of using subcultures.

Cultural Accommodation

In order for drug use to be entirely normalised, Parker *et al.* (1998) suggest there must be some accommodation of use within wider culture, whether through drug use being portrayed in a positive manner in media, or through a broader shift in attitudes of the type described amongst individuals on the fringes of using subcultures, or who were peers of users, above. The case of PIEDs is no different to those drugs charted by Parker *et al.* (1998) in this sense, however in order to determine whether or not PIED use has become culturally accommodated, it is perhaps instructive to mark a distinction between the processes of use, and results of use, in a manner not applied by Parker *et al.* (1998) in their own study, similar to Blackman's (2004) analysis of "glamorized drug-related images or drug-referenced ideas" (p.1) in marketing and media, without explicit representations of the drugs themselves. The reasons for this are as follows:

Perhaps the most significant difference between PIEDs and those recreational drugs reviewed by Parker *et al.* (1998;2002) is that PIEDs are used merely as a 'stepping stone' to the actual goal, and not for some inherent pleasure-giving value, as are drugs such as cannabis or cocaine (although these of course also have some social value, and are frequently used for this reason (Belackova and Vaccaro 2013; Taylor and Potter 2013, Moore 2005)). Since the outcomes are in effect the sole reason PIEDs are used, in contrast to other drugs, it is therefore necessary to consider whether the *outcomes* of PIED use are being culturally accommodated, and whether these outcomes are becoming more normalised, before discussing the issue of accommodation of use in-and-of itself.

With the rise of steroid-using movie stars portraying dominant masculine figures from the 1980s onwards, and a growth in the attention focussed on high-level professional sportsmen by the popular media, the culture began to see a shift towards a view of the male body that was PIED-enhanced (Pope *et al.* 2000*i*), undoubtedly feeding "masculine insecurity while promoting male voyeurism as a basis to make capital", as with the pairing of sex and drugs by the media a generation previously (Blackman 2004:58). This is evidenced by the glamorisation of the PIED-fuelled body in media and advertising, which is used (often in conjunction with sex) to market products (Bell 2008*i*), in the manner Blackman (2004) observed for 'recreational' drug imagery (p.52)¹³.

In the 21st century, with the rise of 'workout culture' amongst young British males, this altered perception of how the male body "should" look has increased (Bleeker 2014), with various magazines and websites dedicated to promoting the 'ideal' body-type, frequently showcasing examples likely achieved through PIED use (see Olesker 2015). With the resurgent popularity of superhero movies seemingly revitalizing the craze of the 1980s/90s for overly-muscled stars, who are frequently of proportions young men could not expect to achieve without PIEDs (Pope *et al.* 2000:36-40), an effect also seen in video games, which perhaps offer as distorted an image of the male body as they do the female (Pope *et al.* 2000*i*:102), in combination with the fascination our culture has for sporting icons, there appears to be a growing obsession with muscle, and

leanness. It is thus reasonable to conclude that PIED use, even if only implicitly, has become wholly culturally acceptable, so far as outcomes are concerned.

This perspective was apparent in the statements of several respondents who acknowledged the drive for young men particularly to look a certain way, best achieved through use of PIEDs:

"[if there was] an instant diet pill that you could just take it and... instantly be skinny... you would have the whole world wanting this pill. And people were telling me that I could be muscly... [and] you think 'yeah... I want that'... you want people to look, and say 'look at me', sort of thing." 'Josh', gym user (interview)

"[I trained] youngsters [who] I find are much more influen[ced by] that sort of thing, they'll look up to a bloke in the gym, and they wanna do whatever he's doing to get those arms, you know?" 'Mark', personal trainer (interview)

Employment and Social Status

Another element perhaps involved in cultural accommodation could be the social status of those involved in drug consuming subcultures. Coomber (2013) notes that PIED users, in contrast to some drug users, tend to be employed, and educated, and this could perhaps in-part contribute to an acceptance of PIEDs not seen with, for example, heroin users, who tend to be (real or perceived) of lower social class, and less likely to be in regular, stable employment¹⁴. Indeed, one sport-oriented PIED user even used the derogatory term "*smack head*" to refer to individuals on opiates and unable to work ('Rose', interview), and there was frequent criticism from more sensible PIED users of those who simultaneously binge-drink, or take cocaine ('Mariusz', interview; 'Jim', interview), in effect broadening the criticism of drug abuse identified above to cover lifestyle choices beyond the actual use of PIEDs themselves. These responses in a sense mirror the views identified by Coomber (1997/2006) that 'soft' recreational drug users held towards heroin users, indicating some perceived distinction between these types of use.

Of the respondents in this research who use or have used PIEDs, every one was either in employment, or self-employed, and many (n=5) held bachelor's degrees. All employment was either in skilled working-class trades (construction worker, security officer, automobile repair worker) or skilled, lower-end middle-class occupations (chemical technician, small business owner).

Similarly, PIED prices fall easily within affordable ranges for even those working in close to minimum-wage jobs, and thus there is little reason for any acquisitive crime to emerge to 'feed the habit', as has been suggested in relation to certain 'harder' drugs, such as heroin (Parker and Newcombe 1987). Several users were spending no more than £12 a week on PIEDs in total ('Mariusz', interview; 'Eddie', interview), and even heavier users often scaled what they took to their income, and what was available to them cheaply at any

given time ('Rich', interview).

These facts indicate that PIED users are often constructive, accepted members of society, and indeed given the numbers of individuals in certain gyms identified as being users, it would appear their drug use often goes entirely unnoticed ('Mariusz', interview). Although there was frequent reference to 'hedonic' users committing crimes of assault when partying on "Saturday night" ('Stephen', interview), even these individuals tended to be in employment or education ('Pete', interview), and it is interesting to consider whether members of this "lad culture" are in fact any more criminal than the average pub or nightclub-goer (see Measham *et al.* 2001:165). Indeed, many of the doormen hired to keep order at these venues are themselves PIED users ('Martin', interview; 'Ian', field diary 14.03.2015; Monaghan 2002*i*), a fact not hidden from customers, who freely accept these individuals' use.

In this sense, PIED use can again be seen as culturally accepted, since beyond the obvious effects they have on a user's body, use is frequently ignored (and thus implicitly condoned) by mainstream society, with the exception of use within professional sports.

Attitudes of Law Enforcement

As noted, a number of respondents compared the use and sale of PIEDs to that of cannabis, with several interviewees suggesting that PIED use was becoming normalised in the same way cannabis use has been in recent decades (above). With reference to this view, it is worth considering the perceptions of respondents regarding law enforcement's attitude towards PIEDs, since toleration by police undoubtedly reflects cultural accommodation within society more broadly:

"If somebody's blatantly openly selling it online, then clearly this is not much of a risk."
'Mariusz', wrestler (interview)

"I've had mates get caught with an ounce of weed and walked. And that's 'class B'. So what are they gonna do if I've got a few ['class C' steroids]?... I don't think they'll give a shit."
'Rich', powerlifter (interview)

These quotes reflect the attitudes of the respondents in general, with few showing any concern over potential illegality of their actions, including in Mariusz's case importing PIEDs into the country, and in Rich's 'social supply'. Indeed, one 'commercial' supplier even stated that he had received letters from "customs" (HMRC) when packages containing steroid and other powders had been seized in transit to him, but was unconcerned by this, in spite of 'supply' technically being an offence punishable by 14 years in custody (cps.gov.uk):

"You just lose a few hundred pounds worth of powder and, sort of, move on." 'Jim', powerlifter/supplier (interview)

It therefore appears the policing of steroids and other PIEDs is indeed softening, in a similar manner to that seen for cannabis two decades previously, and with steroids being only 'class C', this has effectively led to a situation wherein there is no observable concern of arrest or prosecution, and indeed more than one respondent noted that they were aware of police officers using PIEDs themselves ('Stephen', interview), something which has also been reported in the media (BBC News 23.01.2013).

Given the above facts, it would seem the requirement for cultural accommodation of use, identified by Parker *et al.* (1998), has been wholly satisfied. However, as noted in the introduction to this section, although the end results of steroids and PIEDs have become culturally acceptable (to some extent perhaps even demanded), and although PIED users are not a marginalised group, or subject to threat of arrest or prosecution beyond the very largest of suppliers, there are still elements associated with the use (or abuse) of PIEDs which are of concern to the general public, and the existence of these factors indicate that PIEDs have perhaps not entirely become acceptable within mainstream culture. The most significant of these hindrances shall therefore be addressed here.

"Roid Rage"

Outside of professional sports, the main area in which there is significant cultural resistance to the accommodation of PIED use is in concerns over "roid rage", which is frequently referenced in media headlines (for example Mirror 18.02.2013; CNN.com 29.06.2007). Despite the positive results of steroid use having become culturally acceptable, in the form of aspired to body-types, as discussed above, one could perhaps make the argument that the actual *use* of PIEDs has not yet become culturally accommodated, owing to the persistent belief that steroids cause users to become angry, and violent.

Although respondents on the fringes of PIED-using subcultures, and those who actually participated in them, mostly either did not believe in "roid rage", or felt it was exaggerated in the media (chapter seven), a view supported by academics such as Coomber (1999;2013), the concept of a phenomenon of "roid rage" still persists in mainstream culture, including being referenced in popular works of academic nonfiction (Eagleman 2011), in addition to news, and entertainment media¹⁵. With this in mind, it is perhaps not possible to wholly accept that PIED use has become culturally acceptable in the same way as cannabis has, since steroids are still largely believed to confer effects that Bell (2008*i*) compares to the exaggerated claims

of cannabis's harm portrayed in the 1930s film "reefer madness" (see Blackman 2004).

Nonetheless, as Parker *et al.* (1998) note, other recreational drugs which are still (falsely or otherwise) associated with physical or social harm are becoming 'normalised', in spite of this perception (with alcohol perhaps serving as one of the best examples, as binge-drinking culture, whilst roundly condemned in the media, is still celebrated elsewhere in the popular culture (see Barton and Husk 2012; Parker 2007)), and so if the end results of PIED use have become culturally acceptable, perhaps this alone is enough to satisfy the requirement for 'normalisation' to the extent that other drugs, which have not had their harms 'debunked' in the same manner as cannabis (an example being MDMA (Nutt 2012; Measham *et al.* 2001)), have seen, since although there is still resistance to use on these grounds, the tacit acceptance implied by this approval of the results of use certainly demonstrates a significant degree of cultural acceptance, which it could be argued far outweighs the condemnation of the harms often attributed to steroids.

As with the social criticism of drug abuse, referred to above, those within PIED-using subcultures were highly critical of both the media's portrayal of "roid rage", and the types of individuals who 'give steroids a bad name' in this way:

"Two [guys] in [a nearby city] beat up some random person on the street... And [the local newspaper] was like... 'both guys are gym users... but they deny that steroids had a part in their violent behaviour', it's like just because they... go to the gym, why'd you have to try and tie in steroids with it, you know? But it always happens." 'Mariusz', wrestler (interview)

"It always seems to come back to the steroids rather than other [drugs] they've taken, and the fact that they generally behave like arseholes the majority of the time anyway." 'Jim', powerlifter (interview)

Jim's statement here about the types of people likely to be involved in so-called "roid rage" incidents mirrors statements made by Monaghan's (2001) bodybuilders ("you have to be like that [violent] anyway" (Monaghan 2001:167)), and this criticism is often made by more serious 'hardcore' or 'sporting' users of those who do not conduct sufficient research, or intentionally train to be intimidating or better at fighting, as it was suggested some individuals do ('Jim', field diary 11.01.2015; 'Pete', interview). Mariusz's response to the media's inference that anyone who is a gym-user and is involved in violence must also be taking steroids, similarly criticises what he takes to be the unfair representation of the effects of steroids in the media, and again such attitudes are both commonplace in the literature (Monaghan 2001:166; Coomber 2013), and representative of other respondents.

As with social accommodation of PIEDs by non-users, and as with Parker *et al.*'s (1998;2002) discovery that cannabis-using teens often relayed for parents and peers which elements of criticism of the drugs were exaggerated or propaganda, there likewise seems to be a trend for PIED users to question the legitimacy of the "roid rage" 'myth' (Coomber 1999), and argue that violence is not inherent to steroid use. This possibly could indicate the beginnings of a shift away from the 'demonisation' of steroids in this way, as happened in

the case of cannabis use amongst young people (Parker *et al.* (1998;2002)), which might perhaps lead to the broader acceptance of such drugs. However, it is worth noting that such dissenting voices on this topic have been heard for years (Monaghan 2001; Bell 2008*i*), yet still have not altered the mainstream media's representation of steroids to any significant degree (see articles referenced above). Whether this is because steroids are inextricably tied with the concept of 'cheating' in sports, and people therefore *desire* to see them as harmful, thus giving a rationalisation for their instinctive aversion to them (Coomber 2013)¹⁶ is perhaps beyond the scope of this study. However, it is interesting that thus far the efforts by users (and academics) to portray PIEDs as less harmful have not seen the success attained by cannabis users, though as Mariusz notes (and Hoberman (2006) suggests), with the increasing medicalisation of legal PIED use, this might change ('Mariusz', interview).

The question of whether "roid rage" can be considered a legitimate phenomenon, or is merely a 'myth' that 'stigmatises' users (Goffman 1963), shall be returned to in chapter seven. It is clear, however, that steroids still hold a reputation for causing violence, even if they have in all other areas apparently become accepted by the broader culture, especially in terms of their end results, so far as the popularity of the ripped, muscular male physique goes. Cultural acceptance of use might therefore be to some extent questionable, thus necessitating a more in-depth discussion than provided here (chapter seven). However, it is clear that the majority of Parker *et al.* (1998;2002)'s requirements for 'normalisation' have, to at least some degree, been met.

Chapter Conclusion

Whilst in some areas PIED use is still criticised, or deemed unacceptable, beyond use in professional or Olympic sports this opinion is generally a minority one in the gyms and subcultures in which steroids are used, and with young male 'workout culture' becoming ever more prominent (BBC News 25.02.2015; Olesker 2015), in conjunction with the increased medicalisation of society (Hoberman 2006), it seems PIEDs are becoming seen as something ever more 'normal', even to those merely on the fringes of using subcultures. With PIEDs being readily and easily accessible through a number of means, in particular the internet (Evans-Brown *et al.* 2012), and the phenomenon of 'dual sourcing', it appears there is not only a large demand for these drugs coming from this rapidly increasing subculture, but that supply can easily meet this demand, and does so cheaply, and with little risk. These factors, taken in conjunction with the ever-growing emphasis on the appearance of the 'ideal' male body (Pope *et al.* 2000*i*; Bleeker 2014), serve to demonstrate that PIED use, and in particular steroid use, is becoming normalised within society, as Parker *et al.* (1998;2002) discovered had occurred in the 1990s with cannabis, and other drugs.

With these findings in mind, therefore, it is time to look in more detail at the motivations of individuals for beginning use of these compounds, both for performance and image-related reasons, before discussing further the processes by which they learn to use these products, and the effects they have. This shall contribute to the analysis that use is becoming ever normalised, and with a growing proportion of this use being performed by casual, non-sporting users, who it shall be shown have a differing ethnopharmacology (Monaghan 2001) to their competitive counterparts, signalling a normalisation of use that in many ways runs counter to that observed in previous literature, and advocated by powerlifters and other competitive users. This shall be the focus of the following chapters.

4 Decision to Use and Cultural Influence

Introduction

The reasons for an individual's decision to begin using PIEDs are clearly significant to understanding and appreciating the relationships different individuals and subcultural groups have with these drugs. Research into subcultures of both legal and illicit drug users have frequently identified motivations for use that run counter to mainstream societal narratives (Young 1971; Coomber 2006*i*;2010; Barton and Husk 2014), and understanding such motivations is a necessary factor in determining how and why individuals use these drugs more broadly.

Building on the framework of Parker *et al.* (1998;2002), any exploration of 'normalisation' of drug use clearly must encompass a discussion of the initial influences users attribute to their decision to begin using, whether these can be classed as individual, or cultural in origin. In the context of this research, the narrative biographies given by the users themselves serve as the best means of placing such influences within a discursive framework. To this end, this chapter shall explore, through means of qualitative interview responses, the reasons respondents attributed for their initial decision to use PIEDs, and shall place these narrative samples in the context of the relevant sociological literature, thus providing a framework through which the different elements influencing the decisions of these individuals can be identified, and effectively understood.

In this chapter, the researcher shall frequently refer back to the postulated division in behaviours and beliefs between 'sport-oriented', and 'image-oriented' and 'hedonic' categories of user, and this shall form a key part of the framework for subsequent discussion. In addition to exploring elements of 'normalisation' and cultural influence, this chapter shall therefore seek to identify where the differences and similarities between these theorised groups lie, in relation to initial decisions to use, and cultural influences, and to this end shall address them in succession, starting with 'sport-oriented' users, before progressing to discuss those who use primarily for image-related reasons, or for other purposes.

The chapter shall begin by investigating the motivations for commencing PIED use amongst those users in the 'sport-oriented' category. This shall focus initially on further defining the 'sport-oriented' category posited by this research, before focussing on motivations for use described by respondents in this group. This discussion shall initially explore questions of ethics relating to the use of PIEDs within a sporting context, before moving on to discuss motivations that stem from a desire to become or remain competitive within a chosen sport. This shall be followed by an explanation of the influence of peer groups and

subcultural attitudes within the 'sport-oriented' category, on the decisions of individuals to commence use of PIEDs. Following this, the chapter shall move to discussion of further motivations and influences identified by 'sport-oriented' users, including discussion of overlap between this user category and other user types, considered later in the chapter.

The discussion shall then turn to 'image-oriented' users, initially seeking to define the different types of user within this broad class, followed by an exploration of the reasons these individuals gave for commencing use of PIEDs, beginning with issues of insecurity and peer pressure, before analysing such concepts as sexual competitiveness and body capital, and addressing the influence of the emergent hedonic "*lad culture*" on the decisions of those either within, or on the fringes of this subcultural group, to begin using PIEDs. This section shall then explore the influence the emergent 'social network' culture is believed to have, particularly on young males.

Building on this work defining the differences and overlaps between the identified core user categories, the concept of PIED use for 'financial considerations' shall then be discussed, which shall in part build on the research of Monaghan (2002*i*), to explore this further class of user that spans the distinct categories formerly addressed. Finally, the chapter shall turn to those who use for reasons other than those already identified, who tended to be more health-conscious, in a manner similar to some of the populations described by Evans-Brown *et al.* (2012), and Hoberman (2006). The chapter shall then offer concluding remarks regarding the approaches different types of user took to the initial decision to take PIEDs, and relating this back to the identified framework.

Sport-Oriented (Competitive) Use

This research approaches PIED use within a sporting context through a narrow focus. Whilst prior literature has discussed the use of PIEDs in sport in the context of competitions wherein PIED use is banned (see Waddington (2000) for a discussion of this literature), where further considerations of risk, danger, and financial or reputational harm might factor into the decisions of those who begin using PIEDs, the present study shall focus, as Monaghan (2001) did, strictly on groups who participate in sports wherein the use of such substances is not explicitly prohibited. These groups can be termed 'tested', and 'untested' sportsmen respectively, as the former are subject to drug tests as part of the standard practice in their chosen field of competition, whilst the latter are not. This is consistent with the terminologies adopted by these groups themselves (for example powerliftingtown.com 2016*i*;2016*ii*).

The decision to narrow the research focus in this way serves as a useful means of giving the project a concrete focus on a specific set of gym-based user subcultures, allowing for a more in-depth exploration of

these groups. Although this initial section shall briefly touch upon the attitudes of 'untested' sport-oriented users, who form one of the primary groups studied, towards those who use PIEDs within the context of sporting federations where such substances are banned ('tested' sportsmen), this shall be addressed only with reference to the initial decision, based on cultural attitudes, of these 'untested' sportsmen and women to begin using these substances, after which 'tested' competitors shall not be referenced again. Subsequent discussion shall focus thereafter upon contrasts and overlaps between the gym-based subcultures of 'untested' sportsmen, and 'image-focussed', or casual users, respectively. As shall become clear, 'untested' sport-oriented users tended to base their decision to begin using PIEDs on rational analysis of their capabilities, and goals, made in the context of subcultures that to some extent encourage use (e.g. powerlifters).

Ethics of Use in a Sporting Context; Culture of Use within Sport

As suggested above, prior to an exploration of the direct motivations respondents gave for their initial decisions to begin using PIEDs, it is worth briefly addressing the ethical questions presented by use of PIEDs in a sporting context, even in sports wherein PIED use is not prohibited. Since concerns of ethics or morality would naturally be presumed to play some part in the decisions of those who begin using PIEDs for the purposes of improving their performance in sports, this is worth exploring, to see whether such concerns did indeed factor into the decisions of respondents, and how such concerns were assuaged if this is indeed the case.

The sport of powerlifting perhaps allows for the best framing of this discussion, since the majority of sport-oriented users interviewed had competitive powerlifting backgrounds. Additionally, powerlifting serves as a practical example because there are multiple federations in the sport, some of which drug test (IPF, for example), and others which do not (WPC) (see powerliftinguk.com 2016). Although some respondents who used PIEDs had competed in drug-free federations prior to commencing use, it was interesting to note the attitudes of respondents towards those who competed in such federations *after* commencing use of PIEDs. Mariusz, who is primarily a wrestler, but also participates in powerlifting, was openly critical of an individual who was caught by a drugs test in a 'drug free' federation: "*He's an idiot. And he always was on gear as well... [he did it as an] ego boost, basically*" ('Mariusz', interview).

The accusation that the individual in question was an "*idiot*" who wanted to compete against natural lifters simply to boost his ego seems to sum up the opinions of most powerlifters surveyed, who as a rule generally approved of the two-tiered system in their sport, and were displeased with those who jeopardised it, although such practice was acknowledged to be fairly widespread: "*[I] just find it very hypocritical from the ["drug free"] guys, especially when... I know for a fact that quite a lot of them are fucking cheating*"

(‘Mariusz’, interview). This attitude was similarly reflected by non-users who engaged in the sport, but were anti-PIED more generally: “*I don't want to be up against cheaters*” (‘Matt’, field diary 14.08.2015).

In terms of personally competing in tested competitions, the PIED-using respondents who were asked their opinions on doing so were similarly against the practice, as in the following exchange, wherein Rose, a competitive lifter, discussed why she would not compete in ‘natural’ competitions, despite not having used PIEDs for some time, and having only used them for health purposes initially: “*Even now, I feel because I did those substances in the past, even though I haven't done them for... over a year... like, all the research suggests that it does have lasting effects on your body, and I wouldn't feel right competing in tested forums, despite the fact that I would test clean...*” (‘Rose’, interview). Clearly, therefore, ethics did play some part in the decisions of respondents, and they generally did not report being in favour of such “cheating” (at least in interview)¹⁷.

Although these quotes suggest that ethics played a part in some sport-oriented athletes’ initial decision to begin using PIEDs, it seems this moral opinion on PIEDs only extended to not competing in ‘tested’ competitions. Not one respondent who used PIEDs to improve their competitive performance offered any statement to suggest that use of these compounds, in-and-of itself, was to them morally objectionable in any way, and thus none acknowledged that any moral concerns had played a role in their actual decision to begin using. As Mariusz succinctly put it when asked, “*Nothing I do is tested, so... I'm not breaking any rules of anything.*” (‘Mariusz’, interview). Similarly, powerlifting competitor Martin articulated his position on the morality of what he was doing without any notion his behaviour was unethical: “[I] *don't worry who knows about me being on it, because it's my personal use, but I don't wanna bring the club, obviously, into disrepute... So I [only compete in federations] who don't [drug] test*” (‘Martin’, interview).

It is clear, therefore, that the ethics of PIED use, in-and-of itself, was not a factor in the minds of these competitors when they decided to begin using, even if it was generally acknowledged that concealing use to compete as a ‘natural’ was a bad thing. This prevailing attitude could perhaps be compared to the sociological literature regarding moral standards in enforcement within other subcultures, such as the noted disapproval of sex offenders within often violent prison populations (Åkerström 1986; Vaughn and Sapp 1989), or the particular disdain and condemnation of heroin dealers seen amongst other ‘hard’ drug suppliers (Coomber 1997*i*; 1997*ii*). The PIED users from ‘untested’ sports who were interviewed saw nothing wrong in their personal use, as they were not breaking any rules. However, when it came to rule breakers, they were considered “*cheating*” “*idiot[s]*” who were looking only for an “*ego boost*” (‘Mariusz’, interview), something these fellow PIED users found objectionable, and evidently distasteful.

Although of some within image-based user subcultures made reference to either their own use of PIEDs, or the use of friends who nonetheless competed in the ‘tested’ sport of rugby, without the same degree of condemnation seen from powerlifters (‘Eddie’, interview; field diary 01.04.2016; ‘Pete’, interview), those who were serious competitors in ‘untested’ sports were, when questioned, roundly critical of these

practices, highlighting the difference in approach between these two groups in their perception of 'cheats', a significant attitudinal factor, whilst simultaneously demonstrating the manner in which both groups, in terms of their own usage, were consistent in not believing more general societal ethical standards (which as noted tend to condemn PIED use in sport, if not elsewhere) applied to themselves. This again parallels research regarding 'recreational' drug suppliers, who held heroin suppliers to a more general societal, condemnatory standard, whilst excusing their own actions as being less harmful, and therefore not immoral (Coomber 1997).

With this lack of ethical objection to use by the sport-oriented respondents in mind, therefore, the question of what did in fact influence the decisions of these individuals to begin taking PIEDs shall now be addressed.

Desire to be Competitive; Comparison to Peers' Performance

For those interviewees who primarily used PIEDs for sport-oriented purposes, the most common motivation expressed for commencing use was a desire to become, or remain competitive within their sport, consistent with what one might intuit, and in line with much of the literature regarding PIED use to date (Waddington 2000; Voy 1991; Kimmage 1990). Those participating in sports wherein the use of PIEDs is prevalent had strong incentives to begin using, in order to be competitive. This attitude was most strongly reflected in the statements of powerlifters, who tended to be open about their use, and experiences, presumably as a result of their sport's synonymy with performance-enhancing drugs, and resulting lack of negative stigma attached to use within this community.

Jim, a powerlifter who later became a PIED-supplier, described how he began taking steroids after observing the progress other lifters in his gym made when using them. Having formerly competed as a 'natural' lifter in university, where he trained with other natural competitors, he noted the difference between this and 'enhanced' training after joining a 'hardcore' gym, where a number of serious powerlifting and strongman competitors, including British champions, were resident. As he phrased it, Jim noted that these new training partners were: *"using steroids, and... lifting a lot more weight in quite a short period of time, being a lot more competitive, and sort of... given the edge, really"* ('Jim', interview). Observing the gains these high-level competitors were able to make in comparison with his own was a large part of Jim's motivation for beginning use, as he was aware of the need to do so in order to remain competitive if he wished to succeed at the higher levels of competitive powerlifting, as his new training partners had.

As indicated by Jim's path to use, it is interesting to note that this realisation of a need to partake in PIEDs in order to be competitive arose only once the respondent had been immersed in an environment where he witnessed other competitors using PIEDs. This situation is consistent with the findings of Parker *et al.*

(1998;2002) in relation to recreational drug use, wherein exposure to use of a drug through peers can increase the perceived normality of such use, and where commencement of use of any drug without peer influence was uncommon (see also Young 1971). This pattern of commencing use only after being submerged in a culture wherein use was accepted was indeed observed in almost every respondent, and encompassed all the sport-oriented competitors interviewed, indicating the decision process is in this regard consistent with that seen for other drugs. Rich, also a powerlifter, described the influence of peers within a gym environment on his own decision to commence use thus: "*when you're seeing the progress people can make on steroids, and you're trying to train naturally... I know I'm not the only one who saw that and thought they'd really like to get on [PIEDs]*" ('Rich', interview).

Rich, similar to Jim, started out training as a 'natural', coming to the conclusion he needed to use PIEDs to be competitive only after his best friend had begun use, and he had seen numerous other competitors in his gym making significant gains as a result of their PIED use, as indicated by the above quote. Rich makes note of the weights lifted by competitors in one of the 'hardcore' gyms he trained in, and it is clear his desire to be able to compete against these individuals was a key factor in his decision to begin using: "*Guys [were] bench-pressing 200kg, deadlifting over 300. It was mental, the kind of gains these guys had got. Meanwhile here's me, messing around*" ('Rich', interview).

This attention to the specific weights lifted by competitors might be related to Monaghan's analyses of doormen's 'body capital' (2002*i*), and perhaps in the same manner as the doormen there surveyed compared themselves to others in terms of size or technical proficiency, so Rich's motivations, in addition to the type of peer influence suggested by Parker *et al.* (1998;2002), might also be attributed to the influence of attaining such 'body capital', as someone who self-identified as a 'powerlifter' before ever participating in a competition ('Rich', interview). This further evidences the level that submersion in a culture of use plays in the decision of individuals to commence using PIEDs, as clearly in both Rich and Jim's cases, comparison and familiarity were key driving factors.

Whilst use of PIEDs by peers, and prevailing attitudes of the surrounding subculture might naturally be expected to influence an individual's decision to begin using, following similar findings regarding other drugs (Parker *et al.* 1998;2002; Measham *et al.* 2001; Young 1971), it is interesting that respondents involved in sports wherein use of PIEDs is culturally acceptable, such as powerlifting, were not so quick to begin use as those interviewees who had such access, but were not involved in a sport. Indeed, most sportsmen interviewed noted some period of delay between their first entering this drug-associated subculture, and their initiation of use, in spite of their frequently having access to PIEDs for some time prior to commencement. As Jim noted, he "*trained for [competitive powerlifting] for about two-and-a-half, three years... sort of reached the limit of what I thought I was capable of doing, relatively speaking*" ('Jim', interview), before making the decision to begin using. This sentiment was similarly reflected by Rich, who would go on to acquire his PIEDs from Jim once he made the decision to commence use also: "*I stuck it out as a natural for... maybe 15 months... [until I had] quite respectable lifts... and when I had lifts that I thought*

were... semi-decent, then I kind of said 'all right, let's see what [I can] do with this stuff'... I didn't want to just jump straight onto it, I wanted to make sure I had a decent base [first]" ('Rich', interview).

As shall be discussed, this deferral of use was not observed amongst the majority of those whose primary interests in training were image-oriented, and this seemingly points to a distinct difference in approach between those who belong to these separate groups. Whilst image-focussed users, with notable exceptions, commenced PIED use soon after achieving access, and opportunity (below), those who trained for sport delayed gratification, and universally those respondents who trained primarily for competitive sporting spent a significant period training 'naturally' before they began using PIEDs, with Rich's "*15 months*" being the shortest period, compared to mere weeks for some image-focussed respondents. This indicates a significant difference in the 'decision' period between the two groups, as the sportsmen evidently factored in concerns other than simple access to product in making their choice.

Although this observation does not necessarily contradict findings in the literature relating to recreational drug use, since a level of progression and learning to use has long been documented in this area (Young 1971), it is nonetheless interesting to note just how long the period of delaying use extended for some interviewees, and this perhaps could be attributed to certain subcultural structures, wherein a degree of respect must be earned prior to use becoming acceptable, in the same manner as certain jobs are reserved for gang members who already have a certain standing within the group (Venkatesh 2008). Although no interviewees explicitly stated they were worried about others perceiving them negatively if they commenced use without the requisite "*decent base*", several condemned those who did so ('Mariusz', interview; 'Jim', interview; 'Big Steve', field interview), suggesting a certain subcultural norm, or expectation, which parallels Monaghan's (2001) bodybuilders' similar condemnation of those who wished to use steroids without first investing sufficient time training as a 'natural' athlete¹⁸.

In addition to subcultural expectations, the level of research undertaken by sport-oriented individuals prior to use further set them apart from more 'casual' users, as shall be explored in detail in the following chapter. For now, it is sufficient to note that amongst those serious, sport-oriented users, the decision to begin using PIEDs tended to come both after a lengthy period of 'natural' training, and following a significant degree of research, both independent and subcultural. 'Martin', a competitive powerlifter, perhaps best exemplifies the attitude towards approaching PIED use seen amongst sport-oriented respondents, in the following excerpt: "*I've been training for years... Got into [powerlifting] when I met John [gym owner]... I've always researched steroids, always been interested in it... I left it until I was... 36... [then] got into [competitive] powerlifting... and thought to myself 'this is the time... cos it had been in my head for so long, I'm only gonna regret it if I don't, so I might as well just do it and see what happens"*" ('Martin', interview).

Martin notes he had been doing research into steroids even as a casual strength trainer, but despite taking an interest in PIED-enhanced training, waited until he had a specific goal in mind (competing) before

initiating use, and did so only following extensive research. The next chapter shall explore research practices in depth, but for now it shall suffice to note that those involved in sport-focussed use tended to conduct a significant amount of research before commencing use of PIEDs, something not seen amongst many ‘image’ trainers, as shall be discussed below. This again indicates a distinct category of users, who share identifiable features not necessarily ubiquitous across the range of respondents.

In addition to the responses of powerlifters, who made up the majority of sport-oriented users surveyed, the trend towards conducting extensive research, as well as using substances as a means of attaining specific goals to be competitive in one's sport, extended beyond this subculture, with these two elements also appearing as common themes in discussions with those involved in combat sports, such as mixed martial arts (MMA), and wrestling. As noted, the research processes of these individuals shall be discussed in the following chapter, however it is here worth investigating the motivations for commencing PIED use given by these other sport-oriented individuals, as this will evidence the assertion that sport-oriented and image-focussed users can be separated into two relatively distinct groups, with common themes appearing across sport-oriented users' experiences, in sports wherein PIED use is permitted.

Mariusz, a renaissance man who participates in powerlifting, Muay Thai kickboxing, Brazilian jiu jitsu (BJJ), and American-style entertainment wrestling, noted how his initial decision to use PIEDs revolved, as with the powerlifters, around a desire to be competitive in his sport of choice (wrestling), since he needed to gain mass to be a more attractive candidate for an entertainment wrestling company that was holding auditions. As he phrases it: “[My decision to use] *was a matter of size. Basically, I wanted to get to the try-outs of [an American pro-wrestling company]... and there is a limit to how much naturally you can put on... I just hit 30 [that] July... [so it was] pretty much last year to do that, otherwise I'd have missed the chance... So I figured, like, okay for like one year I can go all out for it*” ('Mariusz', interview).

This framing of the decision, primarily to be more competitive in his chosen sport, differs somewhat from those of the powerlifters surveyed, in that Mariusz began using specifically towards a career-oriented goal, and so his decision was at least in-part a financial consideration, in contrast to the powerlifters, who whilst competitive did not see their sport as a financial investment (Indeed, none had at time of interview competed in an event with any financial reward). One might anticipate from this that Mariusz would approach use in a similar manner to other financially-motivated individuals, such as personal trainers, however whilst there was some degree of overlap with such persons, as shall be addressed below, Mariusz's approach to use came closer to that of the ‘amateur’ (un-remunerated) powerlifters, reinforcing the suggestion that users can appropriately be divided into ‘competitive’ versus ‘image-oriented’ categories, with many PTs falling into the latter.

As with the powerlifters, Mariusz confessed to some degree of comparison with peers influencing his decision to begin using, noting how he observed others within his sport using, before commencing use

himself: “*It's fairly basic to figure out how much you can put on [naturally] in a year, and then comparing to how much you can put on when you're on something... So... just seeing guys using it properly and sharpen themselves up, it's like 'okay, it can be done'*” ('Mariusz', interview). Peer influence is therefore clearly not solely a factor within powerlifting subculture, but extends to other sport-oriented groups.

Mariusz also undertook a substantial degree of research before commencing use, again supporting the notion that sport-oriented users put significant emphasis on intellectually appraising the costs and benefits of their planned actions before deciding to use. Once more, this demonstrates the significance of the 'decision' stage for those who use PIEDs for sport-specific purposes, which shall shortly be contrasted with image-focussed users, for whom the decision to use was not always so considered. Prior to such discussion, however, it is worth considering the responses of a further group, competitive bodybuilders, whose approach to informed use was similarly grounded in a desire to be competitive within their sport, and who in this regard perhaps best match the 'sport-oriented' classification posited by the researcher, even if in other ways they might appear wholly 'image-focussed' in their use, thus making this group important in determining the distinction between these populations.

Although there has already been a significant amount of research into the using habits of bodybuilders (Evans 1997; Monaghan 2001), it is worth here discussing this subculture, since as competitive trainers, they fall more within the bounds of 'sport-specific' PIED use, than that associated with other image-focussed trainers (below). This shows the apparent division between these two types of user is not based solely on a concept of 'appearance' versus 'strength', but rather appears to closer reflect a case of 'hedonic' versus 'competitive', with image-oriented, yet competitive individuals such as bodybuilders in the latter class, and therefore distinct from the growing subcultures it is believed are fuelling much of the present increase in use, and 'normalisation' (below).

'Big Steve', an 'old school' bodybuilder, aired his distaste for "young guys" in the gym who used PIEDs in an hedonic manner. In his opinion, steroids were not to be used without a specific goal that necessitated them. As he put it: "*If you've been training since you were sixteen, and you've won a couple of regional comps... and you're looking to do the Britain's [UKBBF championship], then maybe you should get on it... But nowadays it's like everyone wants to go on it, without knowing anything*" ('Big Steve', field interview). This statement, in addition to condemning those who use PIEDs casually, and without real purpose, also demonstrates the parallels between the bodybuilding subculture, and the approaches seen in powerlifting and combat sports. Clearly, Steve believes that PIED use is only to be considered once one has reached a certain level 'naturally', and only as a means of allowing one to compete at a higher standard, in this case bodybuilding championships. In a similar manner to the powerlifters, Steve also noted the long gap between his own commencing weight training, and decision to start using PIEDs. He lamented that not enough of the young (hedonic) gym users he observes take the time to conduct sufficient research into the

compounds they take, and relates this to himself at a similar age: “*when I started out, nobody knew about this stuff... I was training for eight years before I did anything*” (‘Big Steve’, field interview).

This further supports the suggestion that those who use for competitive purposes are far more invested, and use in a more intelligent and planned way, than those who use merely as part of an hedonic lifestyle (below). Although Bodybuilding is an image-focussed sport, and therefore those within the subculture have some overlap with the hedonic, image-oriented users, in so far as appearance outside the gym (Monaghan 2001), conspicuous consumption and leisure (Veblen 1899), or sexual signalling (Saad 2011) are concerned (below), Steve was, if anything, more careful to stress the need to wait before deciding to use, and more critical of those who did not train seriously, than the powerlifters. This could simply be the result of his being older, and therefore more removed from the youth subcultures that Jim and Rich, both still in their twenties, are more likely to be interacting with, and influenced by. However, since his sport is closer in appearance to what ‘workout culture’ and ‘lad culture’ are aiming to achieve in their hedonic use of PIEDs, Steve might also see a greater need to differentiate himself from them, through being more critical of their lack of diligent research, and impatience, thus helping maintain the prestige of his sport.

Although this is beyond the remit of this research, it is notable that similar feelings of resentment towards those who did not use PIEDs sensibly were voiced by respondents in Monaghan's (2001) research into bodybuilding subculture, and this stark divide, and desire to draw attention to it, between casual 'image' trainers, and 'hardcore' competitive bodybuilders, has indeed been noted elsewhere (Fussel 1991; Hotten 2004). For the purposes of this research, the conclusion to be drawn here is that not all image-focussed use is hedonic, or 'casual', and attention must therefore be paid in the categorising of users, with competitive bodybuilders acknowledged as primarily ‘sport-oriented’ in their motivations, to avoid making erroneous claims regarding subcultural behaviours.

As can be seen, therefore, persons involved in sport-oriented use of PIEDs attributed their decision to use to both a desire to remain competitive, and an acknowledgement that comparisons to others played a role in helping to reinforce this choice. Most spent a substantial degree of time researching the compounds they intended to use, and if they mentioned individuals who did not do so, were unanimously critical of them. The effect of such peer influence and subcultural attitudes on those who train for non-competitive 'image' purposes, in contrast, shall be discussed shortly. However, this chapter shall first turn to alternative reasons sport-oriented trainers gave for their decision to begin using, which as shall become apparent, also ultimately tie in with the concept of remaining competitive within a sporting environment.

Longevity / Health Benefits

In addition to the motivations given above, all the competitive powerlifters interviewed had further reasons for using PIEDs beyond remaining competitive, and keeping up with peers. Jim, who had the most experience using PIEDs of this group, noted that he used the steroid ‘anavar’ because “*it has... benefits for... joint health, things like that*” (‘Jim’, interview). Similarly, Martin utilised the peptide hormone *GHRP-6*, which he stated was good for “*rehabilitation for your sleep, for better sleep, stuff like that*”, in addition to its repair properties (‘Martin’, interview). Although neither commenced initial use of PIEDs owing to concerns regarding joint health, or enhancing sleep, it is nonetheless significant that their choice of compounds, following the decision to use, was influenced by such factors.

Some sport-oriented users, however, not only mentioned such benefits in passing, but named them as primary influences in their decision to use PIEDs. Wrestler Mariusz noted that, in addition to needing to attain a certain size to be competitive, and make the try-outs for a US-based professional wrestling company, there were further factors that ultimately influenced his decision to begin using steroids: “[Wrestlers] *don't have an off-season... It's a constant on-season... there is no recovery... I try to sleep and whatnot but there's only so much that a human body can do [naturally]*” (‘Mariusz’, interview). With his need to train around this constant on-season, which he noted could encompass as many as five wrestling shows per week over the summer period, Mariusz had strong motivation to begin using PIEDs both from a financial, and health perspective. His income was dependent not only on his being able to compete, but also on his staying in shape, which meant training, even on days immediately following shows. As he notes, in the professional wrestling world, steroids are “*primarily just done for recovery, for keeping up the size... for not dying*” (‘Mariusz’, interview).

This need to recover to ensure one's ability to keep training and competing, and thus assure one's longevity in the sport, was therefore a key factor in Mariusz's decision to use PIEDs, in addition to his desire to compete at a higher level. It is worth noting here that the concept of wrestlers using PIEDs “*for not dying*” becomes more poignant when one considers the widespread, documented use of opioid painkillers by many wrestlers (Assael and Mooneyham 2004; Bell 2008*i*;2015), a topic addressed by Mariusz when discussing his own experiences. In relation to this apparent epidemic (Bell 2015), Mariusz, who tried to avoid painkillers where possible, noted how “*wrestlers and fighters, especially, [are] in chronic pain. We're non-stop in pain... you wake up and you fucking hurt, you go to bed and you hurt*” (‘Mariusz’, interview). Mariusz's use of PIEDs was not explicitly to help keep him off painkillers, but he did note how the use of steroids and human growth hormone (HGH) did help alleviate the pain inherent to his sport, and therefore allowed him to continue competing without needing to use painkillers. This suggests that in addition to simple recovery, allowing more consistent training and ensuring longevity, PIEDs could be further utilised to help with more serious forms of injury and pain, and indeed were seen by Mariusz as a healthier alternative

to “*pain pills*”, which he felt were a dangerous element within the sport: “*not enough people understand how dangerous [opiate use] is*” (‘Mariusz’, interview).

Polypharmacy and recreational drug use shall be discussed in chapter seven. At this time, it is simply worth noting that the decision to use PIEDs in a sport-related context could both be seen as a means of aiding recovery and reducing pain, as well as a preferable alternative to the damage that competing without them could inflict. This view was not confined simply to the sport of wrestling, and indeed was discussed by other respondents, in relation to various sports, and different ailments.

‘Chris Brown’ is a black belt in Brazilian jiu jitsu (BJJ), and an accomplished mixed martial artist. As with powerlifting, bodybuilding, and wrestling, the sports of BJJ and MMA contain some federations which drug test, and others which do not. When asked about PIED testing in BJJ, where he had competed at a very high level, medalling in the IBJJF European championships, Chris stated that testing was only performed “*Maybe at the highest level, but I've never seen anyone tested*” (‘Chris’, field interview). Similarly, other members of his jiu jitsu club noted that Chris’s *professor* was himself a steroid user, and had never been tested, in spite of competing in world championships (field diary 25.01.2016). Although there is some testing within the jiu jitsu world, this seems largely to be enforced at the country level, with most English venues choosing not to test, and no procedures for ‘out of competition’ testing (see Waddington 2000) in place. Reflecting this, Brendan Schaub – a former UFC heavyweight fighter, and high-level BJJ competitor – at a broadcast jiu jitsu event voiced his shock at an American competitor from a tested federation, Garry Tonon, agreeing to fight a British grappler “*In England, where they don't have drug testing*” whom he stated “*might finish 3rd in Mr. Olympia [bodybuilding championship] right now*” (Schaub in Onnit 2016), alluding to the competitor’s obviously chemically-enhanced physique. MMA is similarly divided, with the top promotion, the UFC, enforcing drug testing procedures (see chapter one), whilst smaller promotions, and international organisations, often do not (Inoue 2014; MMAFighting.com 30.03.2017). This background helps frame Chris’ comments regarding why he believes some fighters use PIEDs, in the same way as the discussion of ‘tested’ and ‘untested’ federations framed the remarks of the powerlifters, above.

Although claiming to not personally use PIEDs, Chris was happy to discuss their prevalence in MMA, which seemed to see more use than in pure BJJ competitions in England¹⁹, and noted he knew a number of people who were using. As justification for this widespread use within his sport, Chris made the following observation: “[Top MMA fighters] *train eight hours a day... your body just can't keep up. So if they can take this stuff to allow them to train longer... if you're training full time, and pushing your body to the limit... [it's probably] healthier for you to have more testosterone, or more red blood cells*” (‘Chris’, field interview).

This argument again comes back to both a need to remain competitive (training beyond what the body can ‘naturally’ handle, because this is what other fighters are doing), as well as a suggestion that PIED use in such a context is in fact health-conscious, rather than harmful. Indeed, Chris described how he had first heard this health-focussed argument in relation to the benefits to competitive cyclists both of

supplementing testosterone, and having marginally increased haematocrit through measured use of 'r-epo' (see Walsh 2007), and adapted this for his own sport. Chris noted that many fighters were aware of such academic arguments, and that in addition to the strength gains and fat loss they could expect from PIED use, many engaged in use primarily for health-conscious reasons. Interestingly, although broadly opposed to steroid use within MMA, both UFC president Dana White, and colour commentator Joe Rogan have noted the health benefits of supplementing testosterone when participating in a pre-fight 'training camp', where the intensity of training can potentially have a negative impact on an athlete's natural testosterone levels (MMAMania.com 2014; MMAfighting.com 2013; Rogan 2015*i*).

The view that many sport-focussed athletes used PIEDs for health reasons was further illuminated by Robert, a gym-based physiotherapist, who in interview related his experiences with (anonymous) PIED-users who accessed his practice. Although the majority of users he treated were image-oriented, Robert noted that some trained for sport, and described how from a medical perspective, the use of PIEDs for health purposes, particularly the repair of damaged tissue, made perfect sense: "*at the end of the day... growing is the same as repairing. It's exactly the same physiological process, you're just creating new tissue... I would say definitely, from my point of view you can see an accelerated repair process [in people using steroids]*" ('Robert', interview). Robert's experiences within his practice demonstrate the way medical and health concerns influenced the decisions of athletes in beginning use of PIEDs, and he noted how individuals who injured themselves would be able to return to training far sooner with this insurance present ('Robert', interview). Indeed, as shall be discussed in relation to health-oriented user Rose shortly, it is clear that for some individuals, such repair abilities were the primary reason for commencing PIED use.

Health considerations and longevity therefore appear to be a significant factor in the decision-making process of many sport-oriented athletes who begin using PIEDs. Although it appears fighters are the most susceptible to these considerations, which rate lower for powerlifters and bodybuilders, the existence of these motivations across sport-oriented respondents again highlights a clear distinction between those who are competitive, and the more casual image-focussed, and hedonic-type users, who did not express such motivations. Health-related concerns are considered only by those who take a longer-term view of their training, and those who have done enough research into PIEDs to be aware of their effects beyond increasing size and strength, or cutting fat. Indeed, breakdancer Mikey, who participated in a sport few would associate with PIED use, stated that the use of human growth hormone (HGH) was in fact widespread amongst older 'breakers', simply because the use of "*2iu per day*"²⁰ in order to help "*repair dodgy ligaments*" would allow them to keep dancing beyond the point they would have had to retire if 'natural' ('Mikey', field diary 29.03.2017). This long-term view of use, or lower *time-preference*, further evidences the distinction between such competitive users and those who used more casually, or hedonically, whose decision-making processes, and how they differ from their sport-oriented counterparts, shall now be addressed.

Image-Oriented and Hedonic Use

As noted, a class of ‘image-focussed’ PIED users exists that is seemingly distinct from those whose primary motivation for use is competitiveness in sports, which can be defined as containing those who train to “look good” without competitive intentions, or train to appear more intimidating, or increase confidence. The most extreme such users, who take PIEDs principally for reasons of acquiring access to sex, drawing attention in nightclubs or on social media, or similar activities, shall here be termed ‘hedonic’ users. These will be distinguished in-text from those image-oriented users who take PIEDs for reasons such as overcoming insecurities, and building self-confidence, although as shall be shown, the two groups tended to have more in common with one another than either had with sport-oriented users, hence are discussed here in tandem.

This section shall first address the motivations of those who commenced PIED use owing to a range of reported insecurities, before looking at issues such as peer influence, sexual competitiveness, integration into certain subcultures (“socialisation through socialising” (Measham *et al.* 2001:18)), and financial motivations. As shall become clear, image-focussed users have distinct, and varied reasons for participating in PIED use, and responses of users, as well as their peers, and individuals on the fringes of the subcultures they inhabit, shed light on what appears to be a very prevalent emerging culture of PIED use amongst young men (BBC News 25.02.2015; Guardian 19.06.2015; Times 19.08.2017), as well as illuminating some of the use that occurs beyond the boundaries of this youth culture.

Insecurity; Desire to Look or Feel a Certain Way

Of those who did not use in what could be termed an ‘hedonic’ manner, the influence of insecurities, and peer behaviours appeared to dominate. Although the majority of the perceived newly-emerging ‘wave’ of use amongst young males was attributed by respondents to an hedonic ‘workout culture’ (below), many interviewees offered insights into more individual, non-hedonic motivations for their personal use, predominantly based around personal insecurities. As shall be discussed later, insecurity was similarly attributed by observers to many who were involved in use as part of an hedonic subculture as well.

‘Josh’ used PIEDs at two different life stages, initially in a group of teenage gym-goers, and then in his late-twenties, when he decided to compete in a fitness modelling competition. Although his later use was more goal-oriented, Josh made clear when discussing his initial choice to use as a teenager that personal insecurities had played a significant role in his decision: “[if there was] *an instant diet pill that you could just*

take it and... instantly be skinny... then you would have the whole world wanting this pill. And people were telling me that I could be muscly... [and] you think 'yeah... I want that'... you want people to look, and say 'look at me' sort of thing." ('Josh', interview).

Whilst Josh's desire to be looked at undoubtedly links with ideas of status, and sexual competitiveness, as shall be discussed shortly, his comparison to overweight people wanting a diet pill is significant. In Josh's mind, he was not looking to become something exceptional, or an "*alpha male*", as many involved in hedonic subcultural groups desired (below), his goal was simply to attain a level wherein he could feel confident, and where people would acknowledge his body. He was not alone in identifying such motivations for use.

Even further removed from hedonic motivations, 'Simon' identified a need to build self-confidence as his sole motivation to use, noting that becoming larger and stronger helped him to overcome insecurities from which he had previously suffered: *I just [do it] because it makes me feel so much more confident. I can go up to anyone, I can talk to anyone, and feel comfortable doing it" ('Simon', interview).* Simon had previously been to prison, and noted some of the difficulties he had earlier suffered in engaging with elements of the normative culture. As someone small in stature, Simon's use of PIEDs, and focus on weight training, helped him overcome some of his insecurities, and alongside his experience of prison, and his child, he credited the effects of training with helping to give him the tools he needed to stay away from deviant choices ('Simon', interview). Simon in this sense was exceptional, as he was the only individual surveyed whose 'deviant' lifestyle choice of PIED use actually helped him, in his mind, to avoid other criminality, as for example he no longer felt the need to carry a knife, owing to his newfound confidence in his body ('Simon', interview). This can be equated with the former addict in Monaghan (2001) who found that Bodybuilding gave him purpose, and kept him off heroin (p.59). This use of PIEDs as a means of combatting personal difficulties or tragedies demonstrates the breadth of motivations individuals had for commencing use for 'image-related' purposes.

Physiotherapist Robert told of an amateur bodybuilder who used PIEDs, but who Robert personally felt was not primarily motivated by a desire to be competitive: *"his dad had gotten cancer and wasted away to nothing, and you got the impression from the way he was talking that he was trying to get as big as possible, so that if he did get cancer, it couldn't beat him, cos he was that big" ('Robert', interview).* This case has parallels with the emergence of bodybuilding within the gay community in the United States in the 1980s, where gay men "began turning to bodybuilding as both a physical and psychological counterweight to the physical wasting syndrome [AIDs]" (Haggerty 2000:301), suggesting Robert's analysis, although merely his subjective opinion of the individual's motivations, is likely to be accurate.

Indeed, having interacted with a large number of PIED users in his practice, Robert felt qualified to relate what he had experienced through his interactions with these individuals, and noted how he perceived *"there's a lot of people who feel the need to get big, purely and simply because they think it's in some way..."*

protective, or makes them less scared" ('Robert', interview). Robert noted how in the case of some clients, he knew for a fact had been bullied in school, or were short in stature and appeared to be attempting to compensate for this perceived deficiency, in one instance commenting semi-facetiously on a gym-user in his twenties who appeared to be taking an exceptional amount of PIEDs: "*It's not making him any taller though, is it?*" ('Robert', interview). This ties in with some of the reasons for use identified in prior literature (Fussel 1991; Monaghan 2001), suggesting Robert's observations are likely correct.

Such examples demonstrate some of the reasons individuals might engage in the use of PIEDs for image-related purposes without participating in what shall be termed 'hedonic' use. Such users were distinct from sport-oriented trainers in their approach to use, especially with regards to the research they conducted (next chapter), and aligned more closely in this regard with hedonic users. Before moving on to solely 'hedonic' motivations for use, however, it is worthwhile exploring an element which seems to overlap, to some extent, all use of PIEDs reported in this study, which is the influence of peers on individuals in the initial decision to commence use. Naturally, this builds on the concept of insecurities, and is therefore suited for discussion at this point.

Peer Influence

As with sport-oriented, competitive use, there was some degree of peer influence reported in the decisions of image-focussed respondents to begin taking PIEDs. However, peer influence in the case of image-oriented users was not necessarily a result of simple observation, and a realisation of what it would take to become competitive given others were using, but seemed to have greater significance and impact, eliciting a more rapid, marked response. As 'Mark', a personal trainer in a commercial gym, noted of the young men he trained: "*they'll look up to a bloke in the gym, and they wanna do whatever he's doing to get those arms, you know?*" ('Mark', interview).

Mark notes how easily swayed members of the young, social media-oriented 'workout culture' tended to be when it came to wanting to achieve the results of others they saw in the gym. Although quite evidently their desire to look a certain way was rooted in motivations beyond the influence of their surroundings (below), Mark nonetheless felt the atmosphere in gyms, especially when it came to males in the 18-24 age group, was driving many to begin using, or at least seek out PIEDs. In his experience, these young men were "*all thinking about it. They're all talking about it... and they're all honest and open about what they want to do*" ('Mark', interview).

Whilst merely being around young men talking about PIEDs will not necessarily influence individuals directly to use themselves ('Matt', field diary 14.08.2015), being part of a culture wherein one's friends and peers were using had a great impact on those who began using PIEDs for image-related concerns: "*when*

you've got your friends... around you, and you can see gains that they're making, you tend to just... you're blinded... I was just going with what the other lads were telling me to do... I didn't really know about steroids, I didn't really research them" ('Josh', interview).

Josh began using steroids at 19, after mere weeks of weight training ('Josh', interview). He acquired them from his friends, who encouraged him to take them, to "keep up" with the gains they were making in the gym. As Josh phrases it, he was "*blinded*" by their gains, and by what they were telling him, and although his initial choice to use was largely grounded in the same reasons he began visiting the gym, a desire to look and feel a certain way rooted in underlying insecurities (above), it is clear that the influence of his friends in convincing Josh to actually take PIEDs was significant. Taken in conjunction with Mark's comments regarding the culture of young men talking about the perceived benefits of PIEDs, and what and why they intended to use, and Josh's comments regarding his own path to use likely reflect the experiences of many young men.

Although Josh actually dismissed the idea that he began using owing to "*peer pressure*", saying "*It wasn't like with smoking, where someone says 'go on, go on'...*" ('Josh', interview) his follow-up comments on what precisely did happen within his group of friends give the impression of at least some direct encouragement to use: "*There was... about... four or five of us that used to train... and there was always two in the group that were slightly more... bossy, to say... a bit more bolshie... And they were obviously the two that started it first... and then eventually all of them, and then eventually me*" ('Josh', interview). Whilst Josh is not keen on describing this scenario as "*peer pressure*", it is nonetheless evident that his friendship group influenced his decision to use, and more directly so than in the cases of powerlifters Jim and Rich, who were influenced more obliquely, through mere observation. Indeed, Josh's experience is in many ways comparable to that seen in 'recreational' drug users (Belakova and Vaccaro 2013; Measham *et al.* 2001), or student binge-drinkers (MacLean 2016; Barton and Husk 2014), wherein pressure to conform is more subtle, than that perceived in Josh's hypothetical cigarette scenario. As Blackman (2004) notes, drug use can be framed by "hedonistic insecurity and identity formation in the lives of young people who are part of a group" (p.67), wherein 'fitting in' with a group identity can influence young people in a manner distinct from classic conceptions of '*peer pressure*', though no less influential in effect (see also Measham *et al.* 2001)²¹.

Perhaps the clearest example of an image-oriented PIED-using subculture featuring such a 'group identity' to which young men seek to conform explored in this research is that of the hedonic "lad culture", and prior to discussion of broader subcultural influences, it is therefore worth detailing how the more direct influence of peers manifested itself within this group. 'Pete', a 23 year-old gym-user, and trainee personal trainer, offered such insights into the influence of peers within "lad culture", based on observations of his own friendship group. Although Pete was not himself a user, he had considered using PIEDs, since all his core group of friends used, for purposes soon to be discussed. Pete described the atmosphere of being involved in such a peer-group, exemplified in this anecdote involving two of his friends, and the decision of one to go on PIEDs: "*It's for the acceptance, for the attention, and... maybe a little bit of peer pressure: 'Oh, I want to be as big as Ryan', 'Well, take this then', do you know what I mean? 'Then you'll be as big as him, till then*

you're just gonna be a little weed” ('Pete', interview).

Although there was clearly a degree of facetiousness here from the individual who told his friend to go on PIEDs, Pete suggests this is just one example of the sort of thing he hears frequently within his subculture, and as he notes, he personally felt this *“peer pressure”* had contributed to his friend's going on PIEDs.

Further elaborating on this situation, Pete made clear that, within the context of young men in the gym, the positives of PIED use were constantly emphasised, whilst negatives tended to be glossed over: *“People who are actually on it don't go 'Well, you could get acne'... 'You could get stretch marks, you could get bitch tits, your heart could start playing up', it's 'You're gonna be massive”* ('Pete', interview).

As shall be explored below, there are reasons why young men focus on portraying a positive image of PIED use, even to the extent of encouraging others to partake. At this stage, it is simply worth noting that Pete believes this atmosphere, and attitudes, contributed to the decision of some of his friends to begin taking PIEDs. Indeed, Pete notes this type of encouragement extends even beyond the boundaries of this friendship group, with these young men portraying PIED use in a positive light to outsiders who approach them, or ask for advice in the gym, whether they mention PIEDs themselves or not ('Pete', interview). Again, this contrasts significantly with the scenario described by the powerlifters, where a degree of peer influence was acknowledged, but in a very different manner. Whilst Rich and Jim were inspired to research PIEDs after seeing others making significant gains using them, Josh and Pete's friends simply accepted the drugs offered by their peers, and this difference shall be further highlighted in the following chapter regarding the process of learning to use. For now, it can be said that peer influence within youth 'workout culture' is evidently a more significant factor in the initial decision to use than for competition-oriented users, who took peer influence as a trigger to research what they needed to do, not the trigger to jump straight on whatever their peers were taking, in order to 'keep up'. Certainly, image-oriented users who did follow friends' suggestions had further, personal motivations for use, however it must be acknowledged that 'peer influence' appears significant in the culture of image-based PIED use, and therefore cannot be ignored as a deciding factor in the choice by individuals to use.

It is worth noting, however, that this pattern of peer encouragement in image-focussed subcultures did have the occasional exception, and indeed one interviewee who had frequently considered using PIEDs noted how a friend who was on steroids constantly discouraged him, to the extent that he had opted not to go on ('Dan', interview). In this instance, however, the friend was somewhat older, and so removed from the young male 'workout culture' to which prevalent steroid use was most frequently attributed. It is therefore likely that views on the acceptability of PIEDs is a generational trend, and indeed, this was reflected in comments made by the older interviewees, such as Robert and Stephen, both in their forties. Once more, such suggestions strengthen the argument that use is becoming normalised, as they show the emergence of divergent ethnopharmacologies amongst the young that are more encouraging of liberal use of PIEDs. This element of cultural acceptance of PIEDs identified amongst young men shall be discussed further shortly. First, it is worth exploring a baser reason for why image-focussed, particularly 'hedonic' users, begin to

experiment with PIEDs: the issue of sexual competitiveness.

Sexual Competitiveness

As noted in relation to sport-oriented users, a primary motivation for commencing use of PIEDs was a desire to become or remain competitive within their sport, a desire frequently triggered when individuals were submersed in an environment where such use, and its results, were apparent. Although hedonic users do not face direct competition in the same manner, it is clear there are nonetheless situations in which these individuals will be in some sense 'competing', whether in relation to one another as peers, as discussed in the previous section, or whether in the context of competing against other males in the realm of sexual desirability, and sexual access. The extent to which such considerations influence the decision of these individuals to use PIEDs is therefore worth exploring, as it poses perhaps the clearest contrast to sport-oriented use of these drugs.

Since factors such as broadness of shoulders, body symmetry, and general muscularity are features to which women are broadly attracted (see Frederick and Haselton 2007), it is unsurprising that many young men found in gyms are training for the express purpose of attracting partners (though more obliquely, participation in sports and succeeding in competition is of course also used as a means of attracting sexual partners (Saad 2011)). Since there is clearly a large degree of competition in this endeavour, it makes intuitive sense that some individuals who take PIEDs for image-related purposes are doing so either exclusively, or primarily, to give them an edge over other males in the sexual arena²².

Pete, whose comments regarding peer influence within his friendship group were referenced above, proved to be an invaluable source in accessing a subculture in which this sexual competition was particularly marked. Whilst I was able to talk to several sportsmen regarding their PIED use with relative ease, in addition to some regular gym-goers who utilised PIEDs for image purposes, access to young men within the burgeoning 'lad culture' was more difficult, as I visibly was not a part of this subcultural group, so was not welcomed in the same way as by other groups (see chapter two). Pete, who trained primarily for strength, but was also part of a group of 'lads' who all used PIEDs for hedonic purposes, and were part of this youth culture, was able to give real insight into his friends' lives, and elucidate why they trained as they did, and what their PIED use was intended to achieve. His comments regarding the way his friends engaged in competition in the realm of sexual attractiveness demonstrate precisely how this element influences the decision of some young men to begin using PIEDs: "*It's image, innit? It's all about who can be the biggest alpha male: Who can be the biggest one in the club, who can get the most girls' attention... should two alpha males clash you can handle it, you can have a fight. It's the whole thing, innit? It's the whole shebang, it's all linked in together*" ('Pete', interview).

Drawing on Butler's (1990; 2004) explorations of language choice, Pete's phrasing here is telling, as he identifies the goal his friends, and other members of this subculture, are working towards as becoming the "*alpha male*", a term loaded with 'biological' or 'animalistic' connotations, describing the male animal who wins the 'mating rights' with females, generally through defeating lesser males in combat, or some other form of aggressive or excessive display (Dawkins 1982;1986; Ridley 1994). In this quote, Pete lays out perfectly the two elements of hedonic PIED use as relate to sex: attracting the attention of females through one's appearance, and being capable of fending off rival males in combat, should this prove necessary in the pursuit of a mate. Such behaviours can be linked with 'historically dominant' conceptions of hegemonic masculinity, as explored by Connell (1995) (see chapter one), where women may effectively be seen as 'prizes', in an explicit intra-male 'competition'. As with Walter's (2011) observation that modern, consumerist culture is pushing young women towards embodying a 'living doll' archetype, and glamorising sexual subordination to men, in hedonic user subcultures, there is overt celebration of the 'masculine' counterpart to this: embodying the '*alpha male*' hegemon.

As such, the young men who participate in these 'hedonic' subcultures are distinct, since there is no pretence they are taking PIEDs, or training in the gym, for a purpose higher than to fulfil their sexual desires in this way (though of course, as a working-class subculture, there is undoubtedly a form of rebellion in lad culture's eschewing of classically middle-class sensibilities (Willis 1977)). Pete openly comments on his friends' motivations for using PIEDs, and in doing so frequently identifies the concept of sexual competition, and sexual 'ownership' of women, often overtly: "[Ryan]'s big, he's aesthetic... he's chiselled: he is massive. *His missus looks like Barbie: She's got fake boobs, loads of make-up, long hair. Together, they look like Barbie and Ken, and that's his thing. He loves taking his top off. Always has. I used to mess around with him, say he had 'Tensilitis', where he'll stand at the bar tensing, trying to get the attention... he does get looked at all the time.*" ('Pete', interview).

In addition to further highlighting the use of PIEDs as a means of attracting sexual partners through show, with Pete's friend 'Ryan' using these compounds to enable him to put on an impressive display of body capital when at the bar, the link to Walter (2011) and Gill's (2011) observations of a cultural shift in the submissive and sexualised role idealised for young women is apparent, in Ryan's partner's efforts to "*look like Barbie*" through cosmetic enhancement. Along with Olesker's (2015) explorations of the 'spornosexual', and the influence pornography has had on the formation of hedonic gym-going subcultures, the influence of sex and ideals of male sexual dominance in the motivations of hedonic trainers are clear. That Ryan is involved in a relationship but still attempts to attract the attention of other females for sexual purposes is additionally indicative of the subculture's 'historically dominant' (Connell 1995) perception of the relationship between the sexes, blending the cultural shift identified by Walter (2011) and Gill (2011) with these hegemonic conceptions.

Beyond the cultural influences identified by Olesker (2015) and Walter (2011), the question arises of the exact role the PIED-enhanced body plays in sexual attraction for these hedonic trainers, beyond 'biology', or

shifting cultural trends (i.e. fashion) (see Pope *et al.* 2000). Looking at the context of broader subcultural behaviours, it is worth considering whether PIEDs are subconsciously utilised as a form of 'conspicuous consumption' within 'hedonic' subcultures, with the rapid 'gains' they grant users intended as a demonstration of 'conspicuous leisure', given the 'showy' nature of this group's tastes not only in physique, but in clothing, cars, and other areas.

Economist Thorstein Veblen conjectured in his '*Theory of the Leisure Class*' (1899) that some expensive purchases were made not because of the inherent value of the items themselves, but because possession of such purchases signalled the owner had enough money they could freely spend it on such things. The concept has been expanded by later scholars to include such examples as music videos in which rappers throw money out of moving (expensive) cars (Saad 2011), to individuals who get visible tattoos to demonstrate they do not need to work in the regular economy (Krugman 2015). In so far as attaining a visibly muscular, defined body requires a serious investment of time, and this in itself requires at least the funds to permit some degree of leisure, it is perhaps not spurious to argue that a display of impressive musculature could work as a form of conspicuous consumption, in addition to any other 'attractive' characteristics, whether fashionable, or cultural, a well-muscled physique could have, thus rendering use of PIEDs for sexual competition doubly rewarding for those who engage in this practice.

Although unlikely to have formed a conscious part of the decision-making process for those involved in such hedonic subcultures who engage in PIED use, and physique-building, it is worth observing that these young men clearly engage in acts of conspicuous consumption elsewhere. As Pete notes, one friend has "*a forty-four grand Merc[ede]z Benz at the minute... he wants to trade that in for a hundred grand Aston Martin.*" ('Pete', interview). It is hardly a stretch to imagine the PIED-enhanced muscles and car serve ultimately the same purpose. Indeed, literature referring to this growing muscle-obsessed youth culture identifies some of the fashion choices, and other expensive preferences of this group (Olesker 2015), and these certainly align with some of my own 'in-field' observations, for example a 20 year-old personal trainer at a local commercial gym driving his brand new 'Alpine white' BMW M-Series after work (field diary 20.04.2017)²³, and when one accounts for such factors, it does indeed seem the use of PIEDs to acquire a certain body-type could be considered an element of this conspicuous lifestyle.

Additionally, it should be noted this 'economic' reasoning can again be referred back to the idea of 'competition', through application of the theory of the '*positional good*', as outlined in Hirsch's '*Social Limits to Growth*' (1977), an extension of Veblen's (1899) theories. Hirsch's assertion was that certain goods are valuable only owing to their (manufactured) scarcity, and are not valued for their inherent contribution to welfare or productivity (e.g. 'Limited edition' colour iPhones). Given that having muscularity as a means of attracting females is likely only to be successful when an individual or group is 'impressive' relative to other males, it seems that use of PIEDs could serve as a means of overcoming the problems that a growing 'workout culture' could pose to young men who wish to 'distinguish themselves from the pack' in this zero-sum game. Although there is not likely to have been much conscious thought regarding PIED use in such

terms, it is clear from Pete's comments that his friends, and others within this subculture, do indeed see themselves as 'competing' with other men (to be the "*alpha male*", or friendship group of "*alpha males*" ('Pete', interview)), and therefore regarding their decision to use in such terms, as a means of understanding their decision process, is hardly specious.

The influence of sex on these young men's decision to use PIEDs, therefore, is undoubtedly present, and Pete's comments regarding his friends' actions and motivations demonstrate this clearly. Indeed, Pete makes numerous references to different friends within this close-knit group who use PIEDs specifically because they wish to be in the best shape possible for known upcoming situations: "*Summer in Ibiza's coming, innit? So that's the goal, really.* [The purpose of taking PIEDs is to be] *more aesthetic than anything else, really*" ('Pete', interview). The effectiveness of this tactic is well documented within this group of young men, and as Pete notes in relation to one friend: "*he's been to Ibiza more times than I can count, and he loves it. He loves just going out there, taking his top off... And for girls to look at him and go 'you're massive!... Can I touch you?', and he's like 'Yeah, course you can. Why not?'. [He] loves it, loves the attention*" ('Pete', interview). Indeed, Pete summarises this state of affairs rather pithily: "*they're only going [to these resorts] for one reason, do you know what I mean?*" ('Pete', interview).

Although to some extent there is an element of 'hidden ethnography' (Blackman 2007) in my work in relation to male sexual practices, and the difficulties or embarrassment of accessing intimate or risky subjects (Blackman 2016), as discussed in chapter two, in my conversations with Pete outside of our formal interview, he nonetheless commented on some of the sexual practices of both his own friendship group (Pete included), and the broader 'lad culture'. Thus although I did not gather as much explicit data on this subject area as I perhaps could have (chapter two), some analysis of the position of sex as an extension of lad culture's archetype of 'masculinity', and therefore its relation to drug use, is still possible to conduct.

One of the key areas in which male sexual practice can be tied to lad culture's perceptions of what is 'masculine' is in this area of "lads holidays", or as Pete refers to it, "*summer in Ibiza*". The fashion for young people belonging to certain subcultures, "lads" in particular, engaging in 'hook ups' in holiday resorts, such as Ibiza or Magaluf, has been documented elsewhere (e.g. Hill 2017; Underwood 2017), and Pete largely confirms the suggestion that young people are travelling to these locations specifically to engage in hedonic, 'no strings attached' sex, as the above quote indicates. Whilst such behaviour amongst youth subcultures is nothing new (e.g. Measham *et al.* 2001), however, Pete further detailed how, within 'lad culture', sexual activity would also frequently involve some degree of homosocial bonding, when he and his friends would "*run through*" a young woman brought back to their shared rented suite, an activity explicitly attempted with as many different young women as possible in the course of their 'lads holidays'. This particular sexual practice amongst 'lads' is noteworthy, since this behaviour to some extent actually parallels some of Anderson (2009) and Anderson and McCormack's (2016) findings regarding the changing perception of 'masculinities', and the reduction in some elements of 'homohysteria', with regards to young men engaging in shared sexual activity. As noted in chapter one, the shift in masculinities from "historically

dominant” (Connell 1995) forms, to a more varied range of ideals, has led to a situation in which there is an overlap between ‘hegemonic’ and ‘inclusive’ behaviours (Anderson 2009). Thus whilst no longer “homohysteric”, or condemnatory of activities that under an orthodox conception might be considered “gay”, lads’ behaviour must still be considered in the context of young men who use women explicitly and only for sexual gratification (Walter 2011), and will happily admit to other men they are lying to their partners (back home) about the nature of these ‘holidays’, and their activities in these locales (as Pete admitted to me). Whilst the extent to which such lies are actually believed, versus the behaviour tacitly accepted by girlfriends and fiancées is questionable, and indeed one must be careful to not deny young women agency in these matters, it is nonetheless clear that whilst these young men are more ‘inclusive’ in their lack of aversion to historically ‘homosexual’ behaviours (such as engaging in “trains” (Anderson 2009)), their sexual practices still reflect a conception of masculinity that is hegemonic, with women viewed as subordinate and objectified, and Pete’s stories further indicate the way in which young women are encouraged to tolerate, and participate in this subordination, undoubtedly tied to the cultural and media influences towards ‘porno chic’, documented by Walter (2011), and Gill (2011).

This can be distinguished from the more ‘orthodox’ conceptions of masculinity observed in powerlifters, who as noted in chapter one, ascribe to a more historically dominant ideal (Connell 1995). Such discussions of multiple-partner sexual activities did not occur amongst the powerlifters in this research, who are broadly more socially conservative than their image-oriented counterparts (though age difference may account for some of this)²⁴. This is significant, since these differences in sexual *mores* are reflected more broadly in language, and action (Butler 1990; 2004) within these groups. Whilst powerlifters do not ordinarily engage in the use of language such as “faggot”, for example, they nonetheless view men who focus on appearance as being “gay” or feminised in some way, hence a cultural norm in which body hair is not removed or trimmed, and worrying about having a “six pack” is mocked. In contrast, the ‘lads’, despite openly engaging in what might be considered “homophobic” language, are not only highly image-conscious, but further engage in bonding acts within the gym, and beyond, that to a powerlifter (i.e. by ‘historically dominant’ standards) would be considered ‘homosexual’, such as cuddling, or sharing sexual experiences, as Anderson (2009) described for fraternity members (also Anderson and McCormack 2016). Divergent sexual practices would therefore appear to reflect the broader cultural values of these differing groups, suggesting lad culture’s motivations for PIED use must therefore be understood beyond the obvious sexual goals, with the context of the close-knit friendship groups this subculture inhabits, distinct from the looser bonds observed for powerlifters, also being significant in determining behaviour.

With the significance of ‘homosocial bonding’ (Anderson 2009) apparent not only in the stories of holidays in Ibiza, and nightclubs, but also in discussions of time spent “*working out*” in the gym (see above), where ‘banter’ is a key feature of interaction, lad culture, and thus members’ motivations for drug use, is in many ways comparable to the youth binge-drinking subcultures documented elsewhere in the literature (MacLean 2016), with the inherent element of ‘identity formation’ (Measham *et al.* 2001; Blackman 2004)

involved in membership of such a group likely influencing the decision of these young men to use PIEDs as much as their stated sexual motives. As Calafat (1998) notes, in 1990s nightlife culture, whilst participants were focussed on looking for partners and sex, these factors were secondary to meeting friends, and escaping the daily routine. With 'lad culture' in many ways a seeming evolution of such nightlife-oriented youth cultures²⁵, it seems plausible participants will have the same motivations as these earlier subcultural groups, with sexual motivations, although significant, nonetheless secondary to friendship bonding, and identity formation.

This cultural encouragement within 'lad culture' shall be addressed in the following section, however, it is first worth situating the inferences drawn from Pete's discussion of his friendship group in the context of the broader 'workout culture', which as noted shares many of the hedonic motivations of 'lad culture', to illustrate the reality of hedonically-motivated PIED use observed more broadly in these gym environments.

Stephen, the owner of a commercial-type gym which recently began catering to the emerging 'workout culture' (Olesker 2015) by installing a *Crossfit*-type strength and conditioning area (see Crossfit.com 2016), discussed how he was aware of an increasing use of PIEDs by young men on his premises. Although clearly not a part of this subculture, Stephen had enough experience to identify what he thought were common threads in the motivations of users, and when discussing this newly-emergent user population, noted how he believed "*men in that 16-25 age group [take PIEDs] based on 'fear', 'food chain', 'sex', all those things.*" ('Stephen', interview). Elaborating on precisely what this meant, Stephen identified a culture similar to that described by Pete, although in doing so perhaps highlights more of the 'insecurity' element to this lifestyle (discussed above), in addition to purely sexual, or competitive elements: "*They're not doing [PIEDs] cos they want to be great boxers, or great athletes, or anything like that... I think it is purely about that sort of Saturday night rules', where they want a higher place in the food chain. Where they're a little bit nervous to ask girls, or they're worried that some bigger guy's gonna beat them up. Those really primitive fears. And I think that's a lot of the reason, behind them wanting the 'Dutch courage', if you like*" ('Stephen', interview). Although speculating, based on his perceptions of the young men he sees training in his gym, Stephen's comments nonetheless reinforce many of the inferences drawn from Pete's interview, both regarding sexual competition, and the increased confidence PIEDs give in allowing young men to face the perceived threat of danger, should a pair of "*alpha males*" fight.

Stephen's comments further highlight the potential overlap between many of the reasons people might decide to begin using PIEDs. As noted above, Josh was insecure in how he looked, and one of his primary motivations in taking PIEDs was to improve his body. Naturally, although primarily a means to boost his confidence, Josh also noted the gains from improving one's physique from the perspective of sexual attractiveness: "*I mean you do tend to want people to look at you*" ('Josh', interview). Josh and his friends (discussed above) could perhaps be said to be the precursors to the current 'workout culture' identified

amongst young men (having been involved in image-focussed PIED use around 2005, before the emergent culture really began to 'take off' (see Bleeker 2014; Olesker 2015; Times 19.08.2017)), and thus there are common themes running from his experiences of using PIEDs for image-enhancement, to those of this emerging youth culture.

Talking to personal trainer 'Dave', and physiotherapist 'Robert', it became apparent that within gym environments, it is understood that personal trainers, particularly young men, often view their job as a means of accessing sex with a large number of partners. Although Dave is older and married, he noted that many of his colleagues used their job as an opportunity to meet women, and Robert confirmed in separate discussions that he was aware there were a large number of "hook ups" occurring in the gym on a frequent basis. Although there might again be an element of 'hidden ethnography' (Blackman 2007) here, since I was only able to gather such data from persons who did not actively engage in the 'workout culture' in which such sexual practices occur, meaning the full extent and context of these were not explored in depth, it is nonetheless clear from these discussions that the suggestion a large number of image-oriented trainers can be seen as having sexual motivations for both their training, and PIED use, is applicable beyond simply 'lad culture', to the broader, emergent 'workout culture'.

Indeed, to bring 'live sociology' (Back 2007;2012) to the cultural environment of the gym, it is clear that many commercial gyms are explicitly sexual environments, and implicitly linked to conceptions of a male dominance hierarchy (Connell 1995) in both their regulation of atmosphere, and even their construction. As noted in chapter two, this can be seen clearly in the layout of male changing rooms in many commercial gyms, which utilise 'open plan' spaces, and stark overhead lighting, to give the impression one is 'on show', and in several of the 'commercial' gyms I visited in the local area, showers and 'drying areas' opened outward into the changing room, suggesting an intent for men to 'show off' to one another. Within the broader gym, this is reflected in the mirrored walls common to commercial gyms, which give a view of all activity occurring, and when combined with changing fashions in gym clothing in recent years, which have become ever more revealing, reflecting 'porno chic' (Gill 2011), suggests an environment of 'display', where all are on show. The women in these spaces thus frequently come to resemble Walter's (2011) 'living dolls', with gym clothing brands now marketing intentionally revealing clothes to young women, to match the 'showy' outfits, such as 'sting vests', they market to young men, and advertising for gyms becoming ever more sexually suggestive. Whilst 'the gym' as a sexual environment has long existed within the gay community (Haggerty 2000; Anderson 2009), where open display whilst exercising was a subcultural norm, the evolution of gym spaces, and the atmosphere of 'commercial' gyms, seems to be shifting ever more towards that of an overt 'stage' for display, whether for young women to 'advertise' themselves (Walter 2011), or young men to intimidate others, and this must be kept in mind when discussing the differences between the 'hedonic' subcultures that train in these spaces, and those sportsmen who generally do not. Since 'hardcore' gyms will frequently not have such features as excessive downlighting, fully mirrored walls, or open-plan changing rooms, it is clear that space reflects subcultural attitudes (Ferrell, Hayward and

Young 2008), and this again evidences some of the motivations of 'hedonic' trainers.

It is worth noting, however, that although not using for hedonic purposes, some of those PIED-users who trained primarily for sport nonetheless identified the allure of use for enhancing sexual attractiveness, even if this was broadly incidental. Rich, for example, who began his training in a 'hardcore' gym, but later moved to more of a 'commercial' gym, commented that: "*some [powerlifters] might try and hide that, and say 'oh, it's not that'. It is. For everyone, to some extent. Everyone wants, kinda, everyone looking when they're picking up weights. If you've got six plates [260kg] on your deadlift, and people are turning their heads to look at you, and when you get girls in the gym turning around and checking you out when their boyfriend is stood right next to them, that's a good feeling*" ('Rich', interview).

Training in a 'commercial' gym, Rich might be more inclined towards such concerns than powerlifters in more 'hardcore' environments, but it seems probable that there are at least some image-oriented concerns experienced even by competitive lifters, simply owing to the increasing importance of how one portrays oneself in modernity (Giddens 1991; Pope *et al.* 2000), particularly with the rise of social media (below). Whilst Rich's comments here might again indicate some blurring of lines between the broad categories of PIED-users identified by this research, however, it is worth noting that Rich is not using PIEDs specifically to achieve this stated result, but merely suggests he enjoys it as a side-effect. It could be argued, therefore, that hedonic users are simply attempting to find a "*shortcut*" ('Pete', interview) to this place wherein one can grab the attention of women with one's muscles, without having gone through the intense training, and without the dedication required, to do as Rich does and lift such huge amounts of weight (approximately three times his bodyweight) in a competitive arena. The next section highlights this difference in lifestyle, wherein the sacrifices made by those who lift for sport are not reflected by many who train for image, by exploring 'lad culture' once more, primarily through the lens of Pete's discussion of his friendship group. In addition to highlighting the desire for a 'shortcut' to sexual competitiveness, this section shall further discuss how this emergent culture, and the broader 'workout culture' encourage the use of PIEDs, through a form of cultural influence that appears to border on pressure to conform.

Social-Media; 'Workout Culture'; 'Lad Culture'

Cultural acceptability of PIEDs was addressed in the previous chapter in relation to Parker *et al.*'s (1998) 'normalisation' thesis, and it is clear there exists an element of in-culture acceptance of these drugs, which normalises their use within certain sectors of the population. This section shall expand on this observation in relation to the cultures surrounding 'hedonic' PIED use, as it seems the emergent 'workout culture', and the more nightlife-oriented 'lad culture', likely influence the decision of many young men to begin using steroids, in a manner similar to that documented elsewhere in the drug-consumption literature, whether in

the realm of alcohol use and binge-drinking (Barton and Husk 2014; MacLean 2016), 'club drugs' such as MDMA (Measham *et al.* 2001; Taylor and Potter 2013), or cannabis use (Belakova and Vaccaro 2013).

When asked about the emergent PIED-using, hedonic youth culture, and prompted with a reference to a similar subculture depicted in popular media, Pete acknowledged the similarities between his own friends' activities, and those depicted on the popular MTV show 'Jersey Shore': "*Like you said, you referred to Jersey Shore, like... that is 'Mike' in a nutshell. He's got tattoos, he's got sleeves, he's got the muscles, the tan... his girlfriend's really hot, but yet he'll still put topless photos on Instagram, on Facebook ... That's him, he's very social media oriented...*" (Pete, interview).

In Jersey Shore (2009), a key element of the show is the 'GTL' ("gym, tan, laundry") and party culture the males participate in, and it is obvious from the posters alone that at least one cast member was using PIEDs (and in all likelihood three of the four principal male cast members were (See Pope *et al.* (2000) for 'natural' versus 'enhanced' body-type analysis)). As Thornton (1995) notes, popular media can have an effect of 'creating' youth subcultures, and it is interesting to document how the rise of both 'workout culture' and 'lad culture' were preceded by Jersey Shore (which depicts the similar North-East Italian-American 'Guido' culture). It is possible the influence of such shows helped to create a parallel, equivalent British culture²⁶, in the same manner as Blackman (2004) documents the changing face of the British dance scene following specific targeting by marketers (p.80; see also Measham *et al.* 2001).

Although this culture ties in closely with the sexual competition and aggressive male hierarchy elements detailed above, it is similarly clear that this hedonic lifestyle encompasses more than purely sex-oriented practices. As Pete illuminates: "*It's all about going out with the lads, drinking beers... even down to the time in the gym, you're spending it with your mates, ain't ya? You've got your mates, you're hanging out with your mates... it's your free time: that's your downtime, that's what you do to relax.*" ('Pete', interview).

With reference to the existing literature on alcohol, it is possible to find numerous examples of individuals who state they are not in fact overly keen on the binge-drinking culture (an element which, as illustrated by Pete's quotes, also features heavily in 'lad culture'), only participating in it because this is how they bond with friends (Barton and Husk 2014; MacLean 2016). If the new, more body-focussed offshoot of this partying culture (Martin 2014) consists of young men who split their free time between partying on weekends, and working hard in the gym on weekdays, it seems wholly plausible that many young men will become involved in PIED use simply to better 'fit in' within the culture to which their friends belong, and indeed some of the quotes cited in the 'peer influence' section above illustrate this analysis perfectly.

Indeed, since sexual competitiveness can be achieved through hard work and dedicated training without use of PIEDs (to the extent muscles might grant any edge in sexual selection), one might contend that there must be something more to the motivation of these young men in using PIEDs than simply sexual competitiveness, and 'culture' would certainly fill this gap. In elaborating on the idea of PIEDs as a "shortcut" (referenced above), Pete also revealed more about the motivations of this user group beyond

simply accelerating the time in which one could expect women to be receptive to one's musculature, and this quote emphasises the real effect that "lad culture" has on these young men's decision to use PIEDs: "*with this 'new age fitness'... sort of trend going on... everyone wants that... quick path, don't they? And I think that's... because things do trend a lot more now, and with the likes of social media... you see the effects that it's having on people... and yet they can still go out and have a good time, and eat kebabs, and have beers and stuff, and yet they're still ripped. And everyone wants it. Everyone wants to know how they can be ripped, how they can be lean... they want to know how they can still have a good time*" ('Pete', interview)

In addition to a desire to be sexually competitive, therefore, it is clear these young men also wish to enjoy eating fatty foods, consuming alcohol, and hanging out with their friends, and PIEDs enable them to do this and still achieve the bodies they desire, which would otherwise require a far stricter diet, and more time-consuming training (See Monaghan 2001). This demonstrates the influence that culture appears to exert beyond sexual competition, and in-gym 'peer pressure', and it is clear that such influences play a role in the decisions of young men in beginning using PIEDs for hedonic, image-focussed purposes (although noting that steroids were not discussed, Olesker (2015) identifies similar motivations within the broader 'workout culture', and makes reference to the use of 'ECA stack', a combination of non-steroidal, and perhaps more widely culturally acceptable PIEDs, for fat loss in this same manner).

There is additionally a further comment on emerging culture contained within Pete's quote, which is worth drawing attention to, as it helps explain why the perceived use of PIEDs has increased so rapidly in recent years, when benefits for sexual competition, and gym camaraderie or homosocial bonding have existed since the early days of bodybuilding culture (Fussel 1991). Pete notes the influence of 'social media' on his friends', and others' decision to use PIEDs, or at the very least engage in this 'workout culture', of which 'lad culture' is a part. This could of course be tied back in with sexual competition, as social media allows young men to connect with more potential partners than ever before. This brand of 'peacocking', however, does not seem to end once one is involved in a committed relationship (to the extent these exist within this subculture, as indicated above), and indeed Pete notes that friends who are engaged, or living with partners, nonetheless show off pictures of their bodies on social media, for the sole desire of approval by the masses: "[It]'s all about his image... all about the social media: how many 'likes' he gets, being aesthetic... He's not strong at all... he's a social media whore, he loves it. Anything to get 'likes', anything to get people to comment about him... it's purely for 'likes'" ('Pete', interview).

Pete's personal experiences resonate with the findings of academics (Bleeker 2014), and journalists who have studied this emergent youth culture. *Esquire* ran an article (Olesker 2015) wherein interviewees from the 'spornosexual' workout culture (with which 'lad culture' overlaps, though is defined by its alcohol consumption in a way 'spornosexuals' are not) discussed the influence social media had on their desire to look a certain way. Interviewees referenced Aziz Shaveshian and Lazar Angelov, two online personalities with large numbers of followers and 'likes', as motivation for their going to the gym, and the author

references the '#Monday#AbsCheck' post of Angelov showing-off his abdominal muscles for the camera as having accrued almost 50,000 'likes' at the time of writing his article (Olesker 2015). *Vice UK*, meanwhile, lamented the rise of this "sad" culture, but similarly noted its ubiquity on social media: "Look through your Facebook friends and I bet you'll find a lot of guys who seem to have swollen in the last few years – guys you'd never thought of as sporty or tough before" (Martin 2014).

Clearly, in an age where social media and 'likes' are of ever-increasing importance, the number of young men who make the decision to use PIEDs simply owing to the benefits they perceive for Facebook and Instagram will be significant (see Bleeker 2014). As Pete opines: "*I think social media's a lot to blame [for the casual attitude young men have toward steroid use]. People are sort of, hyping it all up... and you don't see the side-effects on... social media*" ('Pete', interview). When asked whether he believed this was because these young men wish to portray a false, positive image of themselves to the viewing public, Pete concurred: "*Yeah, of course. No-one wants to put themselves down on social media, do they?*" ('Pete', interview).

As noted above, from the responses of interviewees it seems those involved in image-based enhancement for hedonic purposes conduct little research in comparison to their sport-oriented counterparts, and in conjunction with the portrayal of a false image of the benefits, and dismissal of the costs of PIED abuse, it is clear that the social media 'workout culture', and 'lad culture' combine to create an environment where the decision to take PIEDs is made lightly, with little concern for anything other than results, and the attention they bring. It is therefore clear a link exists between the emergent, largely online culture, and rising PIED use amongst young men (Bleeker 2014).

Financial Considerations

Before moving on to discuss motivations for use not encompassed strictly within the 'sporting' or 'image' categories identified thus far, it is perhaps worth noting that there are material reasons for individuals to use PIEDs for image-related purposes, in a non-hedonic manner. These further motivations for commencing PIED use are worth exploring, as this shall give a broader understanding of the many ways in which individuals come to the decision to proceed with illicit enhancement, even if ultimately such users can still be broadly separated into the categories posited above.

Mariusz, with regards to his image-focussed, secondary objectives, highlights the fact that, in the world of professional wrestling, "*The way the[audience] see us, we're like living comic book characters. So if we look like somebody they can take on in the fucking street, they're not gonna pay the ticket. So... I'm still trying to get bigger, basically... I'm trying to get to like twenty-four, twenty-five stone*" ('Mariusz', interview). In this

regard, although training for sport, and with competitive motivation, Mariusz clearly illustrates just how big a factor image can play in determining the need to go on PIEDs for some. Mariusz used PIEDs primarily for longevity and health, in addition to aiding his competitiveness, however given the importance he placed on his trial with a US-based company (where wrestling is far more popular, and remuneration much higher), the above quote illuminates just how much of a role the necessity of portraying a certain image played in Mariusz's decision to begin using, since as he notes, he has a strong financial incentive to be a larger-than-life character, physically as well as in persona.

Such motivations are indeed also apparent from members of 'workout culture', with Pete noting in relation to one friend the importance PIED use can have beyond attaining 'likes' on social media, or grabbing the attention of potential partners. The friend in this instance was 'sponsored' by a supplement company, which both gave him free supplements, and paid commission on any he was able to sell on to consumers. With regards to this system, which does not appear uncommon in the modern 'workout culture' (being similarly referenced by physiotherapist Robert and gym owner Stephen in interview), Pete observes: "[The supplement companies are] *sponsoring you for a reason. They're sponsoring you because you are big... they've looked at Ryan, and gone 'he's a big lad... I'd like to sponsor him'... It's like that whole thing where you see someone in a magazine... where the bloke's big, promoting a certain type of protein... that's not the only thing he's taking. You're not stupid... everyone knows that's not the only thing they're taking. But they're there to promote a certain supplement... yeah, they're not promoting [PIED use directly], but that's their ideal... that's their selling object*" ('Pete', interview). When further prompted with the question, therefore, of whether he felt supplement companies tacitly approved of illicit PIED use, and indeed encouraged it, though without explicit direction for their staff to engage in such practices, Pete responded in the affirmative (interview).

This situation again highlights how there can be multiple factors determining use even for individuals who appear to reside wholly within one user subculture. 'Ryan' was referenced above as being wholly interested in getting the attention of women, fighting, and hanging out with "*the lads*". Here, however, Pete clearly identifies a perhaps more socially acceptable motive behind his use, in the financial benefits that accrue to him, which Pete takes pains to point out are not ill-gotten or immoral, given "*everyone knows [legal supplements are] not the only thing they're taking*". Similar reasoning and motivation was identified in Chris Bell's '*Bigger, Stronger, Faster*' (2008*i*) with regards to use of PIEDs by fitness models, and the in-gym sponsored sellers seem simply to be a new expression of this same phenomenon (Pete indeed referenced the documentary himself in interview, noting he has it downloaded on his smartphone). This leads in to a similar dilemma faced by personal trainers who operate within commercial gyms, who also might see financial motivation both for getting on PIEDs, as well as for hiding their so doing.

Mark, cited above regarding 'peer influence', is a 'natural' personal trainer. Although athletic and knowledgeable, he voiced his displeasure at losing clients to other trainers, who were advertising their services with their bodies, which due to chemical enhancement with PIEDs rapidly came to look more

impressive than his own. Mark described the situation thus: “*Particularly with younger trainers that were coming into the gym, they were... very misleading toward their clients. They wouldn't admit that they were taking [PIEDs], and told [their clients] they would get in the same shape if they followed the same diet program, and the same training regime [without PIEDs]... and they got a lot of money out of it*” (‘Mark’, interview).

As with the concept of muscularity as a ‘positional good’, there is perhaps a game theoretical discussion to be had here. In the *Prisoner’s Dilemma*, a single individual will benefit through defection from an agreement, which if enforced would benefit the collective above the situation should all defect (as in Lloyd’s (1833) *Tragedy of the Commons*). Unfortunately, since the optimal choice for each individual actor in such a scenario is to defect whilst all others keep to the deal, everyone can be expected to defect (see Davis 2003). In the realm of personal training, all trainers might well be better off if none used PIEDs, however given some trainers ‘defect’ from this situation for varied reasons, a large financial burden is placed on the others, who now must defect also, if they wish to keep up in this zero-sum game of attracting clients. As Mark summarised the situation: “*I would say [other PTs using PIEDs] was very frustrating from a natural trainer’s perspective because... it was much more difficult to run a business honestly when other people weren’t running theirs honestly, and it does hinder your income*” (‘Mark’, interview).

Whilst he ultimately did not do so, Mark confessed to seriously considering using PIEDs in order to help him compete against other trainers for clients (Field diary 02.12.2014). It is clear from this discussion, therefore, that there is strong motivation for PTs to use PIEDs for financial reasons²⁷.

It is also worth noting that there are additionally careers that lend themselves to PIED use which are not encompassed in the gym or sporting worlds. Although neural-enhancing PIEDs such as *nootropics* or *methylphenidate* are beyond the scope of this research, and therefore no professionals were approached regarding PIED use in their employment, some doormen either admitted to, or were noted as using PIEDs to help in their work. As one such individual stated: “*I started working the doors when I was 17, and the other guys were like ‘you need to get bigger, try some of this’, so I started using it then, just for the job*” (‘Ian’, field diary 14.03.2015). Such alternate motivations to use are worth considering, as they suggest another element to the decision-making process for some individuals that encompasses both a subcultural, peer-based influence, as well as a financial, and indeed, self-preserved rationale. If doormen are required to be intimidating as part of their job, and PIEDs will both contribute to this, as well as help make them more assertive, and self-confident (Monaghan 2001;2002*i*), then clearly those working in such fields have strong motivation to begin such use, in addition to any cultural considerations present (see Monaghan 2002*i*). Again, this highlights a possible third area of image-focussed use that neither fits within the ‘competitive’ or ‘hedonic’ categories: the idea of ‘necessity’.

As physiotherapy student and part-time doorman Colin noted, “*Just on the doors you notice [the growth of PIED use]. I have these 18 year old lads come up, and I’m thinking ‘there’s no way that’s how an 18 year*

old's body looks naturally" ('Colin', field diary 10.04.2017). If a growing number of the young men who frequent their places of work are partaking in these drugs, there is a question of whether doormen will find it necessary to use themselves, in order to match the increasing size and strength of their clientele.

This intuitively would seem to be the case, and again ties back in with some of the game theoretical concepts regarding competitions in 'zero-sum' scenarios: if doormen have to be bigger than the average club-goer in order to be intimidating, then if many of the club-going young men of this generation are using PIEDs, doormen will similarly need to do so, simply in order to 'keep up'. This again highlights the burgeoning reasons individuals who might otherwise not have partaken in PIED use may have for commencing such use nowadays. Clearly, there is strong financial, as well as self-preserved incentive for those working in professions such as frontline security to begin using PIEDs (see Monaghan 2002*i*).

This category of 'financial-influenced' use seems from the research conducted to be smaller than other motivations identified (above), with the majority of those in this class having interests beyond their work in beginning use. Most personal trainers get into the profession initially because of their interest in fitness, whether strength-focussed, or image-oriented (as discussed by Mark (interview) and Pete (interview)), and therefore generally have goals in mind in these fields even prior to developing any financial interest in use. Likewise, doormen, and those who peddle supplements in gyms using their own bodies as advertisements, will in general have been training, and possibly using PIEDs to increase their size, for some time prior to any thoughts of financial considerations entering their minds. Whilst this category of individuals might in some ways be distinct from the principal classes identified thus far, therefore, it seems unnecessary to separate such individuals entirely from their constituent groups. Simply from those respondents quoted in this section, to demonstrate, one can easily separate Mariusz's motivations for PIED use from those of the PTs of whom Mark complained, or Pete's friend who advertises and sells supplements. Therefore, whilst this area of influence on individuals' decision-making is noteworthy, those identified in this class can easily be separated into the primary categories identified in this research.

It is clear, therefore, that although at times overlapping, the motivations given by individuals for their image-focussed, or hedonic use, might in fact be broader in scope than those given by competitive sportsmen, whose interests seem generally to extend only to health, and competitiveness, outside of financial considerations. Image-focussed trainers would sometimes train to combat insecurities, and at other times would train to attract partners, or intimidate other men. Some had financial interests, whilst others simply wanted to be able to enjoy alcohol and kebabs without having to worry about losing their physique. Many might simply want to 'fit in' with an identifiable cultural group. In contrast to the sport-focussed users, hedonic users cared little about health, and certainly did not use PIEDs as a means of improving their health, generally ignoring any concerns of well-being entirely, and certainly not engaging in the same levels of research as sport-focussed users, as shall be illustrated in detail in the proceeding chapters.

Before moving on to such discussions, however, it is necessary to address a final class of individual, and investigate the motivations behind their decisions to begin using PIEDs, in order to give a comprehensive overview of the motivations to use found in the course of this research. This class is that of non-sport related, health-focussed use.

Non-Sport-Related, Health-Focussed Use; Other Use

The motivations for use of some respondents did not fall easily within the boundaries of either the 'sport-oriented', or 'image-oriented' categories identified above. This class of 'non-sport-related, health-focussed' users were not so visible in their PIED use as others, with the result that few were identified, and thus engaged, in the course of research. It is conceivable, however, that the types of individual quoted in this section, who used primarily for health, in a manner that differs from the strictly sport-oriented health use identified above, might nonetheless form a significant proportion of the overall user population, simply being less readily identifiable than those groups already discussed. Indeed, use of this type has been identified elsewhere in the literature, both with regards to PIEDs (Evans-Brown *et al.* 2012; Hoberman 2006), and in reference to use of 'recreational' drugs as self-medication for various health conditions, often psychological (Nutt 2012). It should be noted, however, that although these individuals were not felt to fit perfectly within either of the broad classes identified, given their different motivations in commencing use, they nonetheless tended to align more closely with one or the other category, usually identifiable based on training styles. As such, in later chapters, the beliefs and behaviours of these individuals shall be considered in discussions of the broad category (sport or image oriented) which they most reflect, outside of their differing motivations in beginning use. With this in mind, therefore, the discussion shall turn to this distinct motivation for use, in order fully illuminate the range of factors influencing the decision to begin use, uncovered by this study.

Rose was the only female participant in the research. She trained in both Olympic weightlifting, and powerlifting, but did so out of health concerns, as a means of combating her hypomobility syndrome, which caused her severe pain, and was tremendously damaging to her ligaments. Rose had been encouraged by the medical profession at a young age to engage in load-bearing activities, as a means of mitigating her condition, and ensuring some degree of longevity. However, by her mid-twenties, Rose was experiencing severe difficulties, having to take large quantities of opiate painkillers to combat the overwhelming pain, primarily caused by the ligaments in her hands. She described how she first came to consider PIED use as a remedy:

"I went to talk to [the doctor] about [my condition], and they basically said that there's nothing they can do, and that I'm just gonna degenerate... the fate accompanying it is

gonna be awful and horrifically painful... and I called up my best friend and told him basically that I'd been reading a lot about robotic hands, and that I was gonna... just see if I could get my hands sort of voluntarily amputated and replaced with robot hands... and he kind of thought there must be some other...thing that can help... and he started looking up things that can regenerate ligaments... the upshot of that research being that HGH might help... but the hospital said that they wouldn't [prescribe it]" ('Rose', interview 09.06.2015).

Rose was angry that her doctor would not prescribe human growth hormone (HGH) to her, and printed out the research she and her friend had uncovered to show the doctor it could work. In interview, Rose noted how HGH is prescribed by 'anti-ageing' clinics (see Hoberman 2006; Bell 2008*i*), and clearly felt tremendously let down by the medical community for not prescribing it to her, when it is an approved treatment for less-damaging conditions. Rose consequently made the decision to order HGH off-prescription from a company in China, a decision based almost entirely on articles she and her friend had found online. Her decision to begin using was vindicated after a few months of injecting the illicit HGH: "*It made differences that literally... physiotherapists and so on have looked at me and gone 'you shouldn't be able to walk, how the hell are you able to do those things?'" ('Rose', interview).*

Rose's story shall be discussed further in subsequent chapters. For now, it shall suffice to note her account clearly demonstrates the value of PIED use in a non-sporting, and non-image-focussed context. Rose engaged in use to improve her health, and combat a degenerative medical condition, and it undoubtedly changed her life for the better. Indeed, by engaging in PIED use, Rose was able to eliminate her reliance on the strong pain-management drugs she was prescribed, ('Rose', interview) and as with Mariusz's experiences regarding painkiller use in wrestling (above), it is not hard to imagine that use of PIEDs is the less harmful of these two options.

Most interestingly, Rose's experiences can also be said to have influenced Mariusz's own decision to begin use, since he was the friend cited by her, and of course had initially become familiar with HGH owing to its application in wrestling (where it is used to help fight through and simultaneously repair injuries, including ligament damage ('Mariusz', interview)). As Mariusz noted with regards to Rose's initial batch of HGH: "*Obviously we [bought] it for [Rose], cos of her condition, and whatnot. So when we got it, I used myself to be a guinea pig" ('Mariusz', interview; see next chapter).* Although Mariusz did not list helping Rose as motivation in beginning use himself (above), it is nonetheless notable that he chose to test the HGH to make sure it was safe and effective for Rose to use, suggesting a further kind of 'altruistic' use of PIEDs. Although this was the only instance of such 'altruistic' use uncovered in the present research, this finding again shows that individual motives for use exist that go beyond the common themes identified for broad user categories and subcultures.

Perhaps the final element of note in Rose's case at this stage is the fact that, although a competitive lifter, Rose demonstrably did not commence PIED use for competitive purposes, and indeed lamented the fact that she was no longer able to compete in 'drug free' competitions (whilst 'untested' powerlifting

federations still allowed her to compete, she was no longer able to compete in the sport of Olympic weightlifting), seeming in interview to regret the fact she had lost this avenue of competition, as she clearly loved the sport (see above for Rose's comments regarding the ethics of competing in a 'drug free' federation). Whilst Rose reported she began using higher doses of PIEDs in the run up to a powerlifting tournament as a means of being competitive, she felt this only occurred because she had already been forced into an 'untested' federation as a result of her health-oriented use. Therefore, whilst she can be said to fall within the 'sport-focussed' class of user, this was certainly not part of Rose's initial decision, and such competition-focussed use only emerged as a result of her competitive options being limited owing to her health-oriented use. This can be contrast with individuals such as Rich, who began using HGH as a means of repairing an injury only after he had already commenced using PIEDs for competitive purposes ('Rich', interview; see next chapter).

Whilst Rose's tale was undoubtedly the most notable with regards to health-focussed motivations for use, she was not alone in giving a health-centred reason for her decision to take PIEDs. Johnny, a gym-user in his late-twenties, also highlighted his desire to use PIEDs, solely from the perspective of improving quality of life. Johnny struggled with fatigue, lack of motivation, and lethargy, which he believed, after researching these symptoms online, to be a consequence of low testosterone levels. Although he had his hormone panel tested by a doctor, Johnny did not accept their declaration that his testosterone levels were 'normal': *"They never showed me the numbers. I want to see to see the numbers, cos it could be... what is it? 300 to 1200 [ng/dL] is the average range? It's a massive range, innit?"* ('Johnny', interview). Mayo Clinic (2016) lists the 'normal' testosterone range as being between 240-950ng/dL for a male between the ages of 19 and 30, supporting Johnny's analysis that he could well have significantly below average testosterone, yet still fall within the supposed 'normal' range.

In interview, Johnny compared his situation of wanting to enhance his mood and health with supplemental testosterone to that of non-sexually active females who are nonetheless prescribed birth control pills, as a means of balancing their hormones ('Johnny', interview; see CYWH 2011). Elaborating, he lamented: *"it's stupid...something which could potentially give someone a better level of life, their whole life, is illegal... If there's people with higher test and lower test naturally... why can't people be [given synthetic testosterone] to have a better level of life? You know, it's really important [to feel well]"* ('Johnny', interview).

What is notable regarding Johnny's situation is that it does not actually matter, for the purposes of this discussion, whether or not he does in fact have 'low testosterone'. The fact that Johnny was considering using illicit testosterone as a means of countering this perceived deficiency, and not as a means of looking more attractive, or being more competitive, highlights another health-based element to the decision to use. When pressed on what he would like to take if given the option, Johnny's response is telling: *"I'd possibly consider doing TRT [testosterone replacement therapy] permanently. But keep it in like a normal range... if it was from the NHS, I'd be on it permanently if I could"* ('Johnny', interview). The "keep it in like a normal

range" here is very telling: Johnny does not want to be superhuman (or have inherently supra-physiological levels), he just wants enough that he no longer has to suffer from the mental effects he attributes to low natural testosterone levels. In summarizing his feelings, Johnny states: "*I dunno, I feel like I don't have a good amount [of testosterone] for me... I feel like I'm always under what I should be. Always, permanently*" ('Johnny', interview). As Hoberman (2006) notes, there is an ever-growing market in treatments for such conditions, in part owing to the increasing medicalisation of society, and Johnny is therefore not alone in wishing to use hormones to treat problems that perhaps might previously have been tackled through other means, either more neurological-focussed drugs, or diet (Hoberman 2006). Although at the time of interview Johnny was not using PIEDs (though had previously used an over-the-counter 'prohormone'; next chapter), it is not difficult to imagine that his concerns might be applicable to many young males, and therefore could play a significant factor in the decisions of many to go on PIEDs (see for example Bodybuilding.com 2004).

Johnny additionally notes something of a separate desire to go on PIEDs, as a means of tackling some long-term injuries, having heard that some PIEDs (particularly HGH) are suitable for this purpose. Along with a back injury suffered in BJJ, he also suffers from poor shoulder health, and a "*bad thumb, permanently*" ('Johnny', interview). Again, this can be seen as tying in both with Rose's motivations to use medically, as well as the reasons cited by Mariusz (above) as part of a sport-oriented program of use. Interestingly, Johnny's stated desire to use PIEDs for health purposes also overlaps somewhat with those who use for financial reasons, as he made clear in his musings on the costs versus benefits of going on HGH: "*My back's been hurting for nearly a year now... and I do wonder, if I did anything – all the money I'm spending on, like, chiropractors, and spend on like everything else, would it... be the same price, almost?*" ('Johnny', interview). To many within subcultures wherein use of PIEDs is prevalent, the costs of commencing use are somewhat lowered, as factors such as access (previous chapter), and concerns regarding law enforcement do not play so great a role as they might for someone independent of such a subculture. Cost-benefit analyses therefore become a question simply of financial costs versus convenience, and Johnny notably uses the same reasoning as the sport-oriented Rich in this regard, who made similar arguments when discussing his own decision to take HGH, primarily as a means of healing an injury ('Rich', interview). Clearly, it can be extrapolated that such an analysis is not unique to Johnny, and might in fact form a part of the decision process for others, some of whom might indeed eventually commence use of PIEDs.

Finally, it is worth noting in this discussion of alternative approaches to the decision to commence use that some individuals might arrive at the decision to do so as a means of stripping fat not merely for image-related reasons, but because obesity is such a risk to health. Gym owner Stephen related in interview the story of a female client who began using PIEDs because her doctor told her she needed to lose weight, and she found herself unable to do so without the help of a fat stripping performance-enhancer: "*The doctor said 'you can't continue'... so, unbeknownst to us, she got on the internet... and she got clenbuterol. And she used the clenbuterol for probably a year*" ('Stephen', interview).

This instance of PIED use differs somewhat from others discussed, since the individual in question here was not aware the drug she had purchased was illicit, and believed it to be a 'diet drug' of the type frequently advertised, until Stephen made her aware she was using a restricted PIED. However, her using the drug as a means of losing dangerous, excessive fat remains noteworthy, since it matches the findings of Evans-Brown *et al.* (2012), and highlights how, although many people who use diet drugs do so wholly for image-related reasons, there might also be underlying health factors that trigger such use. The woman in Stephen's story apparently went "*from 26 stone down to 12 stone*" [165kg to 76kg] in the course of the year she was on PIEDs ('Stephen', interview), a transformation which must have had significant health benefits, beyond any potential harm caused by the use of the clenbuterol itself. As Stephen summarises the tale: "*my point being... it isn't just bodybuilders, and young men [who are using PIEDs]*" (interview).

The woman in Stephen's story fits in to the 'image-oriented' user classification as well as Rose fits in to the 'sport-oriented' category, but both demonstrably had primary motives that differed to those of most within their respective user groups. Taken in conjunction with Johnny's health concerns, both owing to his perceived hormonal deficiencies, and injuries, it is clear there is a class of people, potentially significant in number (Evans-Brown *et al.* 2012), who use PIEDs for reasons beyond those primary concerns identified for their respective user categories.

Chapter Conclusion

Clearly, there are numerous reasons why individuals make the initial decision to begin using PIEDs, whether they make this decision by themselves, owing to health-related concerns, or they begin using as part of a group, in order to 'fit in' with a certain lifestyle, or subculture. Whatever the reasons identified by those involved, it is clear that broadly these individuals can be split into two primary strands: those who train for competitiveness in sports, and those who train for image-related purposes, with the latter group's motivations further divisible along 'hedonic', versus 'non-hedonic' lines.

The motivations of the individuals within these broad categories are largely consistent, supporting the notion that use can be broadly categorised in this manner, although there are some notable overlaps between these largely distinct groups, in addition to a limited number of individuals who do not fall wholly within a single identified category. In general, however, the decision to commence PIED use was reached only after being exposed to such use by others, even in the case of those who used for specific, well-researched purposes. Such cultural learning shall be addressed in the following chapter, though the manner in which it has been shown to occur in this chapter is indicative of social accommodation and ease of access to PIEDs, and is therefore consistent with Parker *et al.*'s (1998;2002) 'normalisation' framework.

With such diversity of reasons for commencing use of PIEDs, it is clear that use of these substances is no longer restricted to small, perhaps 'deviant' subcultures, as might once have been the case (Evans 1997; Monaghan 2001; Fussel 1991). Indeed, as Evans-Brown *et al.* (2012) note, people appear to come to PIED use from a variety of backgrounds, for a broad range of reasons, even if homogeneity does remain within specific subcultures, such as 'lad culture', or amongst 'hardcore' powerlifters, as this chapter has shown. The ways in which individuals are inducted into cultures of PIED use shall therefore form the focus of the following chapter. However, when considering the motivations of these persons, as identified here, it is clear that a process of 'normalisation' of use is occurring to a significant degree, even if some resistance to this is apparent on the fringes of the cultures involved. This shall be a recurring theme throughout the remainder of this work.

5 Learning to Use

Introduction

The previous chapter, in dealing with how individuals approached the initial decision to begin using PIEDs, made reference to the differing degrees of research conducted by those within the respective 'sport-oriented' and 'image-oriented' user categories. It was noted that sport-focussed users put greater emphasis on conducting research into drugs they were considering taking, as part of their decision-making process, than those who partook primarily for hedonic, or image-oriented reasons, who placed less importance on understanding the effects of the compounds they were looking to take, beyond their superficial, visible effects.

This chapter shall therefore seek to explore the differing degrees of research conducted by the various identified user types, and shall analyse different approaches to knowledge acquisition, to establish what trends emerge within, and between, the identified user categories. To this aim, the chapter shall further seek to ground findings within the context of a broader sociological framework, analysing the roots of differences in approach observed between user groups. This analysis shall draw primarily upon the learning theories of subcultural, and control theorists, whose work emanated from the 'Chicago school', with further reference to drug-specific subcultural literature, such as Becker (1963) and Young (1971).

Differences in actions attributed to various means of acquiring social knowledge have been explored by sociologists since the 1920s, when the founders of the 'Chicago school' sought to explain the transmission of 'deviancy' across generations within the inner city (Burgess 1925). Building upon this work, theories of 'cultural transmission' began to emerge, including Shaw and McKay's (1942) analysis of patterns of learned deviancy, which describe how a 'deviant' individual, "through his contacts with [subcultural] groups and by virtue of his participation in their activities... learns the techniques... and acquires the attitudes appropriate to his position as a member of such groups" (Shaw and McKay 1942:436). The extent to which such patterns of social learning are seen within the different user groups identified in this research shall form a key exploration of this chapter. Similarly, Sutherland (1947) discussed the learning process by which an individual was influenced by excess definitions favourable to deviant behaviours, over definitions unfavourable to such behaviours (Sutherland 1947), a thesis expanded upon by Burgess and Akers in their theory of 'differential reinforcement' (1966) to include specific learned actions, such as a particular process of drug use, and such subcultural theories form the basis by which much of the discussion of social learning within different user categories may be understood.

Additionally, in the case of the rigid application of subcultural norms, which shall be identified in relation

to sport-oriented users in the course of this chapter, explanations relating to the emergence of 'deviancy', such as that identified by Burgess (1925), do not fully explain the existence of a strong, parallel rival culture to the mainstream, as critical of departure from its own subcultural norms by 'deviants' as is the mainstream culture. Whilst theories of 'cultural transmission' (Shaw and McKay 1942) help identify how such norms become ingrained, it is necessary, to fully understand why transgression from such rules is so maligned within these more rigidly-disciplined subcultures, to reference Foucault's theories of 'internalised discipline' (1975), which shall explain some of the difference between the unwavering adherence to a set of principles of use observed amongst powerlifters, which did not appear to be present within image-oriented user subcultures.

Lastly, in relation to the works of control theorist Travis Hirschi (1969), it is acknowledged that subcultural similarities may be affected by individuals seeking out groups with norms that closely match their personal dispositions, with peer *preference* possibly determining patterns of use beyond peer *influence* (Coggins and McKeller 1994), or cultural environment. The chapter shall therefore include discussion of the personal characteristics of individuals that make up the identified user categories, as a means of accounting for such differences, and allowing a better understanding of cultural influences on the process of 'learning to use' to emerge. A case study, that of PIED-user 'Eddie Michaels', shall be included as a means of directly addressing this issue.

The chapter shall therefore be divided into two primary sections, 'sport-focussed users', and 'image-focussed users', as with the previous chapter. These two sections shall each include an introductory discussion of the specified user class, and an exploration of the time periods users spent immersed in their respective subcultures prior to commencing PIED use. These two sections shall then be further subdivided, based on the main paths by which individuals within each group identified having acquired their knowledge of PIED use, and these identified 'pathways' shall form each section's subheadings.

These subsections shall address first the process of 'Independent Research', encompassing such activities as 'lurking' internet forums (Kozinets 2009) and accessing online journal articles, or academic expertise. The second pathway, 'social learning', of the type identified by Becker (1963), and Young (1971), and elaborated upon in Monaghan's (2001) exploration of 'ethnopharmacological taxonomy', shall then be discussed, and it is to this subsection that much of the sociological framework identified above shall be applied. As noted, a case study shall be included, following the 'social learning' subsection of the 'image-focussed users' part of the chapter. Lastly, for each user category the process of 'experimentation', by which individuals learn to use via adaptive personal experience, shall be addressed, exploring how this element of learning varies across user categories and subcultures. The chapter shall then draw conclusions relating to the significance of the divide in methodology of approach that shall be demonstrated to exist between the principle user categories, with reference to exceptions identified in the body of the chapter. This shall give an overview of the process of 'learning to use' discovered in the course of research, and shall suggest areas in which this research could be expanded, and its conclusions tested.

Sport-Focussed Users

As noted in the previous chapter, it was observed that sport-focussed users generally had more knowledge regarding the compounds they took, and more familiarity with issues surrounding use, such as awareness of health impacts and sociological arguments, than other types of user. This section shall detail the ways in which sport-focussed users acquired their knowledge, and this shall in the next section be contrasted with findings regarding the learning process observed in image-focussed, and hedonic users. Prior to this, it is however worth discussing, as per Hirschi (1969), some of the features common to those defined as comprising the 'sport-focussed' category of user, in order to place the coming analyses within the appropriate context.

Principally, it is worth noting the average age of sport-focussed respondents was 33, a figure somewhat greater than the age-range for 'hedonic' users, who were overwhelmingly in their late-teens to mid-twenties (see previous chapter). An argument might therefore be made that, apart from cultural influences, and intent in using, the simple maturity of those in either identified user category could affect the amount of research they chose to conduct prior to commencing use. If hedonic users are simply being introduced to compounds at an earlier life-stage than competitive users, when they are more inclined towards risk (Gardner and Steinberg 2005), this could explain differences in perceived levels of research undertaken, and knowledge obtained before use. Indeed, Josh's experiences, having used both at age 19, then again in his late-20s, would suggest the maturity of the individual at the time they first have access to PIEDs could well determine their approach to research prior to use ('Josh', interview; previous chapter).

However, it is worth noting that powerlifters Jim and Rich, whose approaches to use shall be discussed shortly, began using PIEDs at the ages of 21 and 22 respectively, meaning they fell within the same age range as those identified as principally making up the 'hedonic' class of users ("18 to 24" ('Mark', interview)). Indeed, when one considers that many sport-focussed respondents had used PIEDs for several years prior to participation in the research, it becomes clear that the apparent 'age gap' is not as significant as it might first appear, suggesting it can be largely discounted, except when relevant in the discussion of youth-specific subcultures.

Before continuing, it is also worth considering the educational level of respondents in each class, as this again could influence their approach to use. Of the seven respondents who could be classed as specifically 'sport-oriented users', four had either Bachelor's, or Master's degrees (BSc or MSc). Since this will not be representative of the sport-oriented user population more broadly, and indeed arose primarily because individuals within the researcher's own peer group, and those with academic experience, were more

inclined to talk to me than others, it is possible the degree of research conducted by these individuals is somewhat exaggerated in comparison to what would be seen in a more representative sample. However, as shall be demonstrated, those sport-focussed individuals who did not have tertiary education still tended, with little exception, to perform more research than their image-focussed counterparts, and indeed powerlifter Martin seemingly conducted more in-depth research than any other respondent prior to use, in spite of having no formal education beyond level two. Additionally, although the majority of actual respondents in this user category had some higher education, they frequently made reference to 'norms' within their subculture which can be presumed to apply to those who have not been educated to a tertiary level. The extent to which educational attainment influenced the degree of research conducted is therefore questionable, and does not necessarily discount the findings reported here from being broadly applicable.

With these caveats addressed, it is possible to consider the actual responses of individuals surveyed, and draw conclusions regarding their approach to learning to use. This discussion shall begin with an exploration of time invested in research prior to use, conducted by those users primarily identified as sport-focussed.

Time Invested Prior to Commencing Use

Last chapter, it was observed that individuals who used PIEDs for competitive purposes spent a significant period either researching PIEDs, or training in an environment wherein use was commonplace and openly discussed, prior to commencing use. This is perhaps as significant to the discussion of the processes by which different groups learn to use as the actual methods employed by respondents in obtaining their knowledge, as it illustrates the attitudes of the individuals involved to the process of commencing use, and therefore allows significant inference to be drawn regarding the respective approaches of the user categories identified in this research.

Powerlifter Martin waited the longest of all users interviewed between initially commencing research of PIEDs, and beginning his first PIED 'cycle'. As he phrased it, Martin had "*always researched steroids, always been interested in it*" ('Martin', interview), having started weight training in his late-teens, but did not commence use of PIEDs until he began training for powerlifting tournaments, at age 36 (previous chapter). Although such a long gap between initiating research and commencing use was not commonplace even amongst sport-oriented users, Martin's reasons for delaying capture the cautious approach to use that was the dominant theme amongst competitive users.

In addition to waiting until he had a clear goal in mind – competing in powerlifting tournaments – Martin indicated he delayed use owing to "*all the research being written up [regarding] how bad it was to... add... testosterone when your body's already producing it*" ('Martin', interview). Since male testosterone levels are

naturally at their highest in the late-teenage years, and 20s (Hoberman 2006), the research Martin read suggested the optimal time to commence use of PIEDs was once these levels began to decline, beyond age 30. In waiting until he was 36, Martin was ensuring he would not “mess with the system too bad” (‘Martin’, interview) in reducing his body's natural capacity to produce testosterone (see Mottram 2005; Llewellyn 2011), as this was by then already in decline. Although no other respondent in either category delayed use owing to this consideration, the fact that Martin researched such issues, and adapted his use accordingly, is illustrative of the cautious, informed approach that epitomised the sport-oriented users' process of learning.

Wrestler Mariusz similarly waited until age 30 before commencing use of PIEDs, reasoning at this stage that he realistically would not have many more chances to make it as a professional wrestler, and therefore deciding to take the necessary steps to ensure the best chance of success. Consequently, Mariusz had been training for “three-and-a-half” years in an environment wherein PIEDs were prevalent prior to commencing use, and although Mariusz suggests he did not conduct serious research into PIEDs until the idea of using had already occurred to him, he was nonetheless immersed in a culture of use for a significant period prior to this, and in interview suggests PIED use was frequently talked about by wrestlers and lifters around him throughout this time (‘Mariusz’, interview).

This pattern of gaining familiarity within one's sport prior to investing time in researching PIEDs specifically was reflected in both powerlifters Jim, and Rich's experiences. As noted last chapter, Jim trained for three years in a university gym prior to moving to a 'hardcore' powerlifting gym, and became familiar with the necessary elements of exercise science and nutrition prior to commencing use, in addition to his “chemistry background” (‘Jim’, interview). Similarly, Rich noted he had the opportunity to access PIEDs almost immediately after commencing training, but did not begin using until he had been lifting for “maybe 15 months”, by which time he felt he had a “decent base” of “quite respectable lifts” (‘Rich’, interview). Indeed, given he had access to PIEDs almost immediately on beginning training, it appears the only reason Rich did not commence use immediately was that he felt a need to invest enough time in the sport first to justify doing so, which contrasts greatly with the approach of many image-oriented users (below).

Finally, bodybuilder 'Big Steve' noted he “was training for eight years before I did anything” (Field interview), which he attributes both to a lack of a reliable information source regarding PIEDs at the time he began training , as well as an apparent desire to reach a certain level naturally, before commencing chemically-enhanced training: “I got from ten stone to fourteen with nothing” (‘Big Steve’, field interview). This again indicates desire to acquire a certain familiarity with the culture, and level of performance within the sport, prior to commencing use, and might also suggest a desire to ensure familiarity with the necessary requirements for PIED use before ever utilizing them, something in which Steve is frustrated the “young guys” he sees in the gym today are not interested (below).

The pattern observed amongst sport-oriented users, therefore, demonstrates a significant investment of

time in the individual's chosen sport prior to any decision to use PIEDs, which might suggest greater opportunities for conducting in-depth research, whether independent or social. With this in mind, the chapter shall turn to the ways in which individuals within this user category developed their understanding of PIEDs, and learnt to use them. This shall assist in identifying further trends, and shall establish themes and motivations common to this class of user, which will inform conclusions regarding the ways in which the different categories of user approached the process of learning to use.

Independent, Online Research

A theme throughout the research was the extent to which respondents utilised the internet, either as a means of sourcing PIEDs (chapter three), or conducting independent research. Indeed, of the sport-oriented users surveyed, all but one had used the internet to research compounds they intended to take, or had some interest in taking, with the sole exception being 'old school' bodybuilder 'Big Steve', who noted: "*Back when I started out, nobody knew about [how to use PIEDs]. We didn't have the internet to tell us*" ('Big Steve', field interview). This comment was made in the context of Steve's criticizing "young guys" he sees in the gym who use steroids without first conducting the requisite research, and was framed as suggesting that such individuals have no excuse for their ignorance now that such a tool exists. It can therefore be said that every last respondent in the sport-focussed category was aware of the information regarding use available online, and even though he did not use it for this purpose, being well used to the various compounds he took through years of social learning and experimentation, even Big Steve had visited some of the bodybuilding forums where such discussions took place, as shall be discussed below.

This discovery can be contrasted with Monaghan's (2001) research, where the majority of learning regarding PIEDs in the bodybuilding community was driven by the social acquisition of knowledge, a finding reflected elsewhere in the literature (Fussel 1991). Although the *Underground Steroid Handbook* (Duchaine 1989) had sold well in the bodybuilding community prior to this (Assael 2007), such materials were far from readily available until recently, with the rise in internet access, and indeed previous literature in this field frequently makes reference to how articles in bodybuilding magazines skirted the issue of PIED use, acknowledging it only 'between the lines' (Fussel 1991; Hotten 2004; Monaghan 2001), with knowledge of how PIEDs worked, and could therefore be used safely and effectively, being restricted only to the select communities and subcultures wherein they were prevalent, and certain academic journals.

This emerging dominant method of information distribution significantly changed the way in which individuals access information regarding these drugs, and the present research in this way confirms, and builds upon, the findings of Evans-Brown *et al.* (2012) in their study of online discussions of PIED use,

showing that local market actors also access this resource with great frequency. As with the discussion last chapter, parallels can once more be drawn between the responses given in the present research, and trends observed in traditional, recreational drug use, including the evolving ways in which individuals learn about and access these drugs, as identified by Van Hout *et al.* (2013), and Power (2014). Sites such as Bodybuilding.com parallel in many respects the recreational drug datahub Erowid.org, sharing both links to academic articles and discussions of personal user experience, in the same manner the latter site does for psychoactive drugs (See Power 2014 for an exploration of this type of website). Once again, therefore, the following discussion can be related to findings in other illicit drug markets, and are not necessarily unique to PIED users, in spite of the properties otherwise unique to users of these substances, as have already been enumerated.

Powerlifter Martin was quoted in chapter three as having sourced PIEDs online, having first visited forums, where fellow users directed him to appropriate sellers. As Martin noted in interview, his primary source of information was "*Bodybuilding forums, you can get a lot of information from there*" ('Martin', interview). This information covered not only suitable websites from which one could order PIEDs, but also included detailed discussions of the effects of PIEDs, and recommended ways of using them. From Martin's perspective, having this resource available had a significant effect on his decision to use, as well as his decisions regarding with which compounds to experiment: "*as I found out about more things which could help me [train], then obviously I've researched it... the internet probably has been a big factor*" ('Martin', interview).

This quote epitomises Martin's research methodology, and captures the pervading attitude of sport-oriented users as a group towards researching online. Martin notes how he would search forums, and "*find out about*" different compounds which could aid his training, then conduct further research into these substances, not relying simply on what he read on the forums. Regarding this further reading, Martin describes how he was happy to search around on the web, commenting that he simply "*researched online, everything's online – [it's] brilliant, [I] love it*" ('Martin', interview).

This demonstrates Martin's desire to ensure he was aware of all relevant information regarding the compounds he intended to take. Although not explicit in his sources when conducting this further research, which he implied was far-reaching, from the remainder of the interview it is clear that Martin had accessed detailed information, which is likely to have included academic articles from medical journals, given his impressive understanding of the methods of action of the drugs he uses: "*GHRP6... after 15 minutes it releases a... body chemical called ghrelin, which makes you hungry as hell... But I went to GHRP2... which is exactly the same, a next-generation GHRP, [but] you don't get the hunger*", "*it's a structured growth hormone which doesn't give you the side-effects growth hormone does, but it also gives you the benefits, without the sides. So it's a win-win*" ('Martin', interview).

As shall be shown, the medical and physiological knowledge of those in the image-focussed user category

rarely came close to that demonstrated by Martin here, though this appears to be a common feature of sport-oriented user subcultures. This suggests an element of sport-focussed users being less easily satisfied with the information they are presented with in the first instance on forums, and Martin's desire to read in-depth all he could regarding the compounds in which he took an interest was considered the most intelligent approach to researching compounds by the majority of respondents in this category.

The manner in which Martin discovered the growth hormone releasing peptides [GHRP] he references above can further be used as a sample case of how his research would progress from an initial interest, to time spent searching forums, to investigating further possibilities in-depth. Martin's comments regarding this process demonstrate clearly the precise manner in which he would conduct research online, and the sheer depth to this process: *"I've researched growth hormone probably for about 5 years, and then after about 2 years, I've come on to the [growth hormone releasing] peptides cos they've come on to the scene a bit easier, and obviously the internet's a bit more freely available, information on there, so I've found out about it a bit more. So I've researched the peptides about 3 years before I done them"* ('Martin', interview).

This quote demonstrates how Martin refined his research interests after discovering new information, and further illustrates the time he spent researching PIEDs before making any decision to use them. The GHRP compounds are relatively new, as Martin notes, and so he purposefully waited until satisfied with the level of research available before making the decision to take these drugs. Although this thoroughness of research prior to use was not seen across the board amongst sport-focussed users, with Martin arguably being the most diligent in this regard, it is nonetheless representative of the methodical approach adopted by the majority of users within this category prior to use, the only clear exceptions being Big Steve, who began using PIEDs prior to widespread internet connectivity, and Rich who adopted such practices only after completing his first steroid 'cycle', whose experiences shall be discussed below.

Indeed, several sport-oriented respondents gave some indication of the extent of the research they conducted online, and although none were as thorough as Martin, it is clear from their comments that respondents from this user-category were careful to ensure they had sufficient information regarding the compounds they were interested in taking, and rarely relied upon the casual understandings that shall be shown later with regards to some 'image-focussed' users.

Powerlifter Rich, who openly admitted he undertook his first 'cycle' without conducting sufficient research (see 'social learning', below), commented on how his approach to research had changed in response to his negative experiences. In the context of discussing the half-lives of various compounds, and explaining how these can affect one's hormone levels during a cycle – impressive medical knowledge, gleaned from his now-thorough approach to research – Rich summed up what had since become his guiding principle in approaching the use of PIEDs: *"if you're gonna do this stuff, be really careful"* ('Rich', interview).

As Rich noted with regards to his experience of 'cycling' without having a sufficient understanding of the compounds he used, his knowledge wasn't wholly deficient even at that stage, and indeed, in contrast to

many image-oriented users, he was aware of some of the negatives associated with cycling PIEDs, and knew the accepted procedures with regards to cessation of use: “*it's not that I was an idiot... I had prepared PCT [post-cycle therapy]*” (‘Rich’, interview). Indeed, Richard’s post-cycle therapy involved both taking an “*oestrogen blocker*” (tamoxifen), and injecting human chorionic gonadotropin (HCG), as a means of ‘restarting’ his natural testosterone production, suppressed during the course of his cycle (‘Rich’, interview; see Evans 1997) – the entire post-cycle therapy course as recommended by most online sources such as bodybuilding forums (see EliteFitness.com 2005, “*Protocol(s) 1/3*”). This seemingly well-planned PCT failed, from Rich’s understanding, because he was using both a short-acting ‘ester’ (trenbolone-acetate), and a compound with a long half-life (boldenone-undecylenate), and so he had timed his PCT incorrectly (‘Rich’, interview). Rich clearly had a firm understanding of the ‘standard requirements’ for PIED use before this first cycle (his PCT mimicking that recommended on EliteFitness.com (2005)), and when this did not prove sufficient, he meticulously researched, in order to discover what had gone wrong, so he could avoid the same difficulties in future (‘Rich’, interview).

In the second half of the chapter, this shall be contrasted with the approach of Simon, an image-focussed user who had a similar experience when ceasing use, but a very different psychological reaction, as well as comments from Pete regarding his friends’ use, to highlight the difference between Rich’s model of learning from failure with further research, and that observed amongst image-focussed users. For now, it is simply worth noting that, having started with what might be considered a reasonably respectable level of knowledge regarding PIED use, Rich went on to acquire an in-depth chemical and medical understanding of the compounds he took, after being spurred on to further research by his negative experiences, and indeed could now quote half-lives and methods of action from the top of his head with ease (‘Rich’, interview). The process of ‘experimentation’ as a means of learning to use shall be discussed further below, however it is clear from Rich’s interview that he performed a degree of research online comparable to Martin’s, including academic sources and in-depth medical research, even if somewhat belatedly in his case.

Wrestler and weight-trainer Mariusz similarly mixed a strong base of initial understanding with an element of learning from experience and adapting (see ‘experimentation’, below), and likewise conducted much of his research “*looking up online*” (‘Mariusz’, interview). Mariusz’s method of research shall be discussed shortly, in relation to the negative perceptions some users in this group had to the level of advice available on the internet, however it is here worth noting that Mariusz similarly conducted research both on bodybuilding forums and beyond, to ensure he had access to what he believed to be a balanced perspective regarding these compounds (‘Mariusz’, interview). It is also worth noting that Mariusz was additionally involved in conducting the initial research on behalf of Rose, whose experiences of online research could therefore be said to have been initiated by him (previous chapter).

Although using primarily for health purposes, Rose was a competitive powerlifter, and former Olympic weightlifter, so in many respects can be considered part of the ‘sport-oriented’ user category. Although her medical concerns obviously made conducting in-depth research a more pertinent concern for Rose than had

she used only for sporting performance, it is nonetheless worth noting how she approached researching HGH and other compounds, especially since she was initially influenced in this research by Mariusz.

Having received some initial advice from Mariusz regarding his findings, Rose subsequently began to undertake her own research into the effects of HGH, and conducted this in a cautious, methodical manner: "*I did a lot of research about... potential side-effects... I did a lot of research, like just reading what people had sort of done*" ('Rose', interview). Rose here demonstrates a dual approach to determining whether or not HGH would be suitable for her to use: Initially, following Mariusz's informing her of the potential upsides of taking the compound, Rose conducted her own independent research, specifically investigating the negatives that could be associated with use, in the form of "*potential side-effects*". This research was clearly conducted in an academic manner, as she only followed this up with reading about other people's personal experiences on forums after first satisfying herself with regards to the available information on potential side-effects. This combining of objective information and subjective (informed) opinion, with regards to learning about substances, was a constant across sport-oriented respondents, although the latter was generally performed 'offline' (see 'social learning', below). By combining different sources of knowledge, Rose could be more certain she understood both the upsides, and potential negatives of use, both from an academic perspective, and on a more personal, 'human' level, and thus could better satisfy her desire to make a truly informed decision with regards to the dosages and durations she intended to use.

In sum, it can therefore be stated that within this user population, the conducting of significant independent (online) research was treated as an important step prior to use, and barring the exceptions already identified, was followed universally by respondents. As Martin summarised this approach to learning: "*I wanted 100 percent of the facts, from as many sources as possible, before I [did] anything*" ('Martin', interview).

As shall be demonstrated with regards to 'experimentation' with compounds (below), sport-focussed users as a group had a tendency to be cautious in their approach to PIEDs, and this observed common temperament undoubtedly contributed to the level of research undertaken prior to commencing use. However, a number of sport-focussed respondents also noted they adopted this cautious approach to online research owing to concerns over the advice given on some forums, and this distrust of certain sources is worth addressing, as it appears to have strongly influenced several sport-oriented users in how they conducted their research, and also highlights some of the divide that shall later be addressed with regards to image-focussed users, and the differences between these groups so far as online research of compounds is concerned.

Although Big Steve did not visit bodybuilding forums for advice on PIED use, being already familiar with the compounds he took before the popular growth of the internet, as a bodybuilder he nonetheless had an interest in keeping up with discussions regarding his sport. As noted above, Big Steve felt that a lot of

"young guys" using PIEDs "*these days*" had "no excuse" to not use correctly, given the wealth of information readily available online ('Big Steve', field interview). However, with regards to some of the posts found on bodybuilding websites discussing the PIED 'stacks' posters were using, Steve noted critically how "*you look up what some of the guys are saying they take online, and... it would kill you. There's no doubt, it would kill you*" ('Big Steve', field interview). As someone who had trained for years, and had a high degree of 'ethnopharmacological' knowledge, it is clear that whatever Big Steve observed on these forums to garner such a reaction must have been extreme: "*You wouldn't believe the amounts some of them are taking... a gram of test a day!*" ('Big Steve', field interview).

In Steve's example, the given amount of testosterone used per day is equivalent to roughly twice the weekly amount used by many strength trainers (for example Mariusz (interview)), so it is perhaps not hyperbole when he suggests such 'stacks' could be dangerous to the user's health. Although Hotten (2004) discusses the veracity of the amounts of PIEDs professional bodybuilders claim to take, noting these are generally exaggerated, and that most fellow professionals read 'between the lines' of such listings, it is nonetheless significant that such information is available on these forums, since those who do not conduct further research of the type in which Martin engaged, and are not submerged in the bodybuilding subculture as Big Steve is (and Hotten's (2004) interviewees were), are potentially liable to emulate this exaggerated consumption. Indeed, as shall be discussed next chapter, Steve was aware of young males in his gym who followed such advice, and were using such excessive dosages. It is therefore clear that the sport-focussed respondents who conducted thorough research beyond the initial forums they visited had good reason for doing so, and indeed this played a significant role in the process of learning to use for many respondents in this category, perhaps evidencing something of a subcultural distrust of certain other groups of PIED user, and the advice such individuals give.

Mariusz, frequenting some of the more commonly-known bodybuilding forums, was similarly critical of these networks with regards to the recommended PIED 'stacks' users uploaded, noting how, in his experience, a lot of the image-focussed 'gym rats' "*find completely bullshit information about [steroids], because like... when you read those fucking forums, if somebody cannot, like, construct a sentence in his own language, basically, you should not be taking medical advice from him²⁸*" ('Mariusz', interview). This comment, although a general criticism of such forums, also appears to be specifically referencing the infamous online bodybuilding personality 'GH15', head of the popular GH15.org forums, who is known both for his incredibly high dosing of multiple PIEDs, and his remarkably broken English. As Mariusz notes, many 'gym rats' (hedonic users) he meets have clearly read the posts of GH15, and similar individuals, and have conducted no further research on the topic beyond taking this personality's advice regarding what to use. Mariusz was highly critical of individuals who approached PIED use in this manner, and was a lot more thorough in his own approach to researching compounds.

Mariusz's *modus operandi* with regards to researching PIEDs was as follows: "*It was a matter of finding like the most conservative opinions, then the most outrageous ones, and trying to fit something in between*"

(‘Mariusz’, interview). Although being somewhat facetious, Mariusz elaborated by stating that he would try and find negative reports on compounds that countered those which seemed overly favourable, such as those posted by GH15, and similar persons. Perhaps unsurprisingly, this led to Mariusz’s using PIEDs in a more conservative manner than the ‘gym rats’ he criticised throughout the course of our interview: “*I don’t have... anywhere near as much as they say on forums you have to use*” (‘Mariusz’, interview). Rather than rely on the forums that Big Steve criticised, and that Mariusz was aware many of the hedonic users he encountered, whom he felt used improperly, or even recklessly, relied upon, Mariusz employed a tactical means of determining the best compounds and dosages to use, an approach unique to him in the context of the present research: “[I was] *trying to look up like people who got caught, for example. You know, people who like, trained in the NFL... [the] dosages they were on and what durations, stuff like that. Cos that’s what I was interested in, basically, the regimen*” (‘Mariusz’, interview).

Whilst ‘gym rats’ trusted the word of online amateur bodybuilders, and internet personalities such as GH15, assuming them to be knowledgeable in the subject of PIEDs, and therefore valuable sources of information, Mariusz realised that professional athletes, such as NFL players, who had received bans for doping, and whose steroid ‘regimens’ were later published, were the individuals most likely to be taking a ‘cycle’ appropriate for an athlete such as himself. In effect, Mariusz would use reports of the practices of those found ‘cheating’ in sports where PIED use was banned as a means of determining what he should take as a competitor in untested sports, working under the assumption that NFL players and similar professional sportsmen have the money and resources to get the best advice regarding use, and the best products. This approach is inventive, and as noted, was unique to Mariusz in this study. The approach seemed to work for Mariusz, however, as he took far lower doses than those recommended on bodybuilding forums, whilst “*not getting any side-effects, [and] the gains I’m getting are fucking ridiculous*” (‘Mariusz’, interview).

Mariusz, as with powerlifters Martin and Rich, was further able to reference specific biological and chemical functions that determined the effectiveness of PIEDs when used in a certain manner, and had evidently from his descriptions performed a similar degree of research to his fellow competitive respondents regarding the relevant academic information on the PIEDs he used, beyond his exploration of athletes’ habits of use. In an instance of both criticizing the high dosages he sees image-focussed users taking, and demonstrating the specific medical knowledge he has acquired through his further reading, Mariusz was able to offer the following criticism regarding the mainstream, subcultural knowledge of hedonic users, as observed by him: “[taking large doses is] *unnecessary, because your receptors get saturated to fuck, and it stops absorbing anything anyway. Especially if you end up stacking it*” (‘Mariusz’, interview; next chapter). Beyond highlighting the possible health risks and other negative implications of excessive use, Mariusz asserts that the evidence shows taking mega-doses of compounds, as recommended on some forums, simply does not work. He here both critiques the forums he does not trust, and demonstrates his erudition in this area, as illustrated by his understanding of receptors and binding, a degree of knowledge not seen amongst the image-focussed respondents, as shall be shown shortly.

It is clear, therefore, that although PIED/bodybuilding forums were accessed by many sport-focussed users, the advice given on them is not necessarily considered optimal, and they were often used simply as a means of hearing about new substances, to be researched further, as in the case of Martin's reading up on GHR peptides (above), or for comparison to recommendations made on more 'conservative' sites, as Mariusz discussed. Naturally, some degree of knowledge regarding sensible doses would be necessary prior to reading such forums, in order for one to discern whether or not the recommended cycles were harmful, or ineffective, as the users quoted above were able to, and this ties in with the strong element of subcultural, ethnopharmacological learning through peers that shall be addressed next.

The 'competitive' users appeared unanimously to have some understanding of acceptable dosages and combinations prior to commencing independent, online research, and this appears to have influenced them in going beyond forums, referencing what are perceived to be more reliable sources, such as academic journals, or the usage habits of professional athletes in sports that focus on performance and not size, such as NFL athletes in Mariusz's case, or professional cyclists, as MMA fighter Chris cited (previous chapter). This knowledge was sourced from a broad range of materials, with the majority of users in this class additionally citing the documentary '*Bigger, Stronger, Faster*' (Bell 2008*i*) as a source for their learning about PIEDs, as well as the occasional citation of discussions seen in the sociological literature, such as Jim and Mariusz's repeating of arguments made by Coomber (1999;2013), and others (Bjokqvist *et al.* 1994) regarding '*roid rage*', in academic publications on the subject (chapter seven). For the most part, however, the initial introduction of many to academic knowledge regarding PIEDs was through the same means as many users were influenced to make the initial decision to begin taking these substances: the influence of peers. This form of local, subcultural learning shall now be addressed, in order both to place the independent research approaches discussed in their appropriate context, and to discuss further means of learning, beyond those identified thus far.

Social Learning; Ethnopharmacological Knowledge

The previous chapter addressed how individuals are inducted into different cultures of PIED use, with many users introduced through friends, learning the process of becoming a user through these social connections (Becker 1963; Young 1971). This section shall build upon this subcultural form of learning, in relation to determining how different individuals within the 'sport-focussed' user category acquired their 'ethnopharmacological' knowledge of PIEDs, which dictated the substances used, and the durations and dosages of 'cycles', within this user group, in addition to the independent research conducted, discussed above.

As noted last chapter, the sport-oriented users interviewed were unanimously deeply involved in subcultures wherein the use of PIEDs was commonplace, prior to commencing use. Additionally, there was also a geographic, or peer-specific factor that determined patterns of use, as evidenced by Jim's decision to commence use only after moving from a university gym, where PIED use was not prevalent, to a 'hardcore' gym where it was more accepted, evidencing the influence social networks exerted on the decisions of individuals to begin using. It is equally clear that such networks additionally determine the ways in which individuals learn to use, and as shall be seen, this is further evidenced by the divisions identified between image-focussed users' patterns of use, and those of their competitive, sport-oriented counterparts, discussed here.

As noted above, powerlifter Rich initially acquired his knowledge through local, subcultural means, and only conducted in-depth, independent research following a negative experience, which caused him to realise he needed to learn more about the substances he was taking. Rich was introduced to powerlifting through his friend Jim, and it is clear that Rich relied heavily on Jim's knowledge in his evolution in the sport: “[Jim] showed me the lifts... wrote... all my programming, got all my pre-workouts, told me which shakes to buy, what I should be eating. All of that. And I literally just did what he said” ('Rich', interview). This reliance on his more experienced friend's knowledge extended to the decision to use PIEDs, with Rich trusting Jim to have his best interests in mind: “I kind of knew who [else] was using, and I probably could have spoken to people [in the gym], but I wanted to go through Jim” ('Rich', interview).

As Jim had been using PIEDs for some time prior to Rich's commencing use, and has a “*chemistry background*”, and familiarity with the mechanisms by which drugs work, it is perhaps not surprising that Rich would trust Jim's advice more than his own abilities to independently discern what information was reliable, and in this way Rich's learning process can be related back to the traditional, pre-internet means of learning through contact with more experienced users, as seen in Monaghan (2001), and elsewhere in the literature (Fussel 1991; Evans 1997), and indeed within ‘recreational’ drug-using subcultures (Becker 1963; Young 1971; Parker *et al.* 1998). In the preceding section, Rich's first post-cycle therapy 'stack' was discussed, and compared to that recommended by an experienced user on the forum EliteFitness.com (2005). As can be seen in the following quote, Rich acquired this knowledge through peer-based learning, being advised by Jim when ordering the steroid 'cycle' from him: “*Jim had said to me 'when you're on [steroids]... take tamoxifen at the same time, to keep your... oestrogen... under control, and have some HCG ready for when you come off'*” ('Rich', interview).

This form of social learning is worth noting, since it is not only between friends, but also between supplier and customer. In the above example, on being asked by Rich to supply him with steroids, Jim gives advice on what additional drugs Rich should get to manage side-effects both whilst 'on-cycle', and to manage effects when ceasing use. As noted with reference to Mariusz's conducting online research on Rose's behalf, it is clear that learning to use through the knowledge of friends is commonplace in these subcultures. However, it is interesting to note the additional element of advice given by a supplier at time of sale, as identified

here by Rich. The literature regarding 'social supply' of recreational drugs describes this type of relationship, where a friend of the user acts also as supplier, and will both sell to, and use with, their customers (Taylor and Potter 2013; Belakova and Vaccaro 2013; Moyle 2013). In such cases, there is an implicit element, where a knowledge imbalance exists, of the more experienced supplier helping the less experienced user to learn the process of use, as initially addressed by Becker (1963) and Young (1971), and further explored by these 'social supply' theorists.

It is therefore of note that such an element of knowledge diffusion from supplier to customer can be shown to exist within powerlifting subculture, as this suggests a direct form of cultural learning, akin to Shaw and McKay's (1942) 'cultural transmission', which could lead to more homogeneous patterns of use amongst those who buy through experienced local suppliers, compared to those who source product online (see Evans-Brown *et al.*'s (2012) research into online purchases for a perspective on the latter). This idea of cultural transmission within subcultures shall be addressed further below; for now, it is worth noting further this process of learning through suppliers, as this shall help further understanding of the processes by which use is directly learnt within such subcultural environments.

It is clear from further comments made by Rich that his relationship with Jim frequently mixed a form of peer-based knowledge exchange with this more traditional buyer/seller relationship, as in the following example: "*I was speaking to Jim... saying 'I wanna get back on [steroids], but now I've got this shoulder injury... I don't know what kind of gains I'll be able to make with it'... he'd been talking about 'equipoise' – boldenone – saying it was really good for like injury repair... and I said to him, you know, 'what do you think, for this sort of [injury]?... and he was like 'yeah, yeah, no problem. I'll get you some'" ('Rich', interview). Rich learnt to use from Jim both as a friend and fellow powerlifter, and yet this process was also undeniably influenced by their buyer/seller relationship, to the point where a question regarding the possible effectiveness of a drug for a specific purpose might be seen as Jim's taking advantage of an opportunity for a sale. This again ties in with the 'social supply' elements identified above. Rich trusts Jim to give him accurate information, and have his best interests at heart, in spite of the fact that Jim can make a sale by portraying the drug in a positive manner, whether this is accurate or not.*

Although this finding might suggest the 'friendship' relationship between supplier and consumer extends beyond trust simply to not be "ripped off" by one's supplier (Belackova and Vaccaro 2013), to a trust that a supplier will not take advantage of their knowledge imbalance with a 'friend' to simply make a sale (see 'personal trainers', below), it is significant that, within 'hardcore' gym environments, this trust in suppliers to provide accurate information was not perceived as misplaced, even when the individuals were strangers, or came from a different user subculture, suggesting a further cultural norm preventing misinformed use.

Mariusz, whose opinions on the types of user and seller typically found in a gym environment shall be discussed shortly, affirms the concept of sellers passing on requisite knowledge of the products they supply to users, noting that often problems he observes arise owing to "[The] average 'gym bro'... asks for steroids.

Obviously the guy offers him things he knows he should use first: test, and whatnot. Everybody's scared of syringes, so...they buy pills [instead]... So they already fuck their liver up, straight up, from the beginning" ('Mariusz', interview; see next chapter). Note how, although this extract was principally a critique of persons in the 'hedonic' user category, Mariusz nonetheless points out that, in general, sellers will attempt to push clients on to the products most suitable for the user, before agreeing to sell other items requested, perhaps less suitable for the buyer's experience level or circumstances, even if such advice could potentially cost the supplier a sale if followed.

This parallels observations made by Monaghan (2001), where he noted many competitive bodybuilders were extremely critical of PIED 'abusers', yet would still sell inappropriate products to them if pressed, on the assumption it was up to the buyer to decide if they wanted to listen to the experienced user's advice or not. Jim similarly confirmed that he would sell any product he was asked for, that he could acquire, although if he felt the person clearly did not know what they were doing, but refused to listen to his advice, would mark up the sale price, in his words determining price on a principal of: "*it depends how much of a cunt you are*" ('Jim', personal correspondence 26.03.2015). Clearly, therefore, sellers would attempt to pass on knowledge of sensible use to any client, and those who would not listen to such advice were in effect 'taxed', which one could argue acted as insurance for sellers against negative publicity for their product generated by incorrect usage, a rational motive for employing such policies of price discrimination (Harford 2008; Becker 1974).

Gym-based sellers were therefore frequently recognised by sport-oriented users as giving relatively reliable advice to buyers within 'hardcore' user environments, and additionally were seen to penalise those whom they did not feel would use compounds correctly. This suggests a culture of use that is relatively rigid in its expectations, as was suggested to some extent by comments earlier in this chapter regarding the amount of investment users made in their sport prior to considering themselves 'ready' to commence use of PIEDs. Clearly, if suppliers can be anticipated to give advice to users that might inhibit them from making a sale, as in Mariusz's example above, there must be a strong cultural norm that overrides the financial benefits seen to arise from misleading individuals in order to make a guaranteed sale. Indeed, this type of norm would seem to go beyond that identified by Shaw and McKay (1942) and other subcultural theorists, if it acts to rigidly enforce a set of norms even upon those who are not a part of the subculture in question, as with the "*gym bro*" who is advised to use a sport-type 'cycle' by his supplier in Mariusz's example.

Drawing on Foucault (1975), it seems plausible there is an element of "*internalised discipline*" to be found within the environments that 'hardcore', sport-oriented users inhabit, where a 'norm' of use is so strong that users and sellers are discouraged from deviating from this, even to their own cost. The application of such a theory would explain why sport-oriented users invested more time in ensuring they were 'ready' prior to commencing use, than those from subcultures without such a normalised '*discipline*', in addition to explaining why suppliers might be willing to lose money, in order to ensure customers followed 'correct' protocols of use. If the 'norm' of a subculture is strong enough that deviation is seen as particularly

egregious, then an individual would be more likely to '*discipline*' themselves into obeying prevailing norms (Foucault 1975), and this might explain why image-focussed users, who might inhabit spaces marked by greater disorganisation (Burgess 1925), or be "exposed to a variety of contradictory standards and forms of behaviour rather than to a relatively consistent and conventional pattern" (Shaw and McKay 1942:170), differ from the more rigid submission to cultural norms observed amongst sport-oriented users (see below).

As noted in chapter three, there was a strong degree of criticism amongst sport-oriented individuals for the actions of uninformed PIED users, and this perception regarding differences in knowledge between these groups shall be discussed further. Prior to this, it is worth exploring further the ways information regarding PIEDs was discussed within the gym environment, thereby contributing to dissemination of knowledge throughout the subculture, and supplying the contextual norm from which deviation is posited to have been discouraged through this '*internalised discipline*' (Foucault 1975). This discussion of the development of different circles of knowledge, although naturally building upon theories of cultural transmission in establishing norms (Shaw and McKay 1942), shall be explored principally through the framework of Monaghan (2001) in his theory of '*ethnopharmacological taxonomies*', informing the manner in which such different norms of use arise within parallel environments, and cultures.

Rich highlighted how the free exchange of information regarding the products individuals used within his subcultural space was integral to his own learning process: "[I'd] been hearing about trenbolone... I know I spoke to some guys at the gym... about it", "*again, I've heard guys talking [about PIEDs]*" ('Rich', interview). These quotes further help describe the mechanisms by which a collective, subcultural knowledge arises within a gym environment, building on the '*normalisation*' thesis (Parker *et al.* 1998) discussed previously, and evidencing Monaghan's theory of separate '*ethnopharmacologies*' of use (2001). What is perhaps more interesting than the existence of collective knowledge, and exchange of information within such groups, however, was the discriminating manner in which Rich assessed such knowledge, mirroring the processes discussed above regarding online research. In the example quoted, Rich took the subcultural knowledge he had acquired regarding the drug: "*I'd been hearing about trenbolone, it helps you really lean up... [but] I've heard tren can have... horrendous [side-effects]*"²⁹ ('Rich', interview), and consulted a more trusted source of information, Jim, who advised Rich on what to take "*when you're on tren*" ('Rich', interview). This again evidences the prevailing '*discipline*' of caution amongst sport-oriented users, and demonstrates how even when a form of cultural transmission regarding a product occurred, the '*norm*' of approaching use in an informed manner prevailed.

Evidencing this claim, the combining of local, subcultural knowledge with a more trusted opinion, whether an informed friend with experience of use, or respected online source such as a medical journal, was a common theme within the sport-focussed category of user. Powerlifter Martin used his local network of peers in a similar manner to how he utilised the bodybuilding forums he frequented online, combining the experiences of those who had used, with his independent reading, to come to a more rounded understanding of what to expect from certain drugs: "*I heard about [ostarine] through a friend. I'd looked*

through the website previously, and I'd researched it, obviously online again, but I thought to myself 'I'll wait'... because it was... very, very new stuff... [but] I know a couple of Crossfit lads who have been doing it and made massive gains... so I thought I'd give it a go" ('Martin', interview).

In this scenario, Martin likewise takes information of which he is unsure, in this case from the internet, and combines it with a local, trusted source, to come to a decision regarding use. This combining of differing types of information closely parallels Rose's research methodology cited in the previous section, wherein she would mix both academic medical research with personal user experiences of HGH found on forums. This process of learning through multiple sources, both local and online, was a pattern that held for the majority of sport-oriented users. However, as with online research, different local sources were considered to be of varying value for information by users, and this discussion shall therefore turn to the process of how sources were categorised as 'trusted' or not.

Mariusz, whose approach to online research was detailed above, described his process of learning to use a certain drug, having identified one he was interested in taking: "[I] just read up about it, asked the most sensible people about it... a few questions basically on... what to do with it... I knew a lot of people who did it as well" ('Mariusz', interview). As with Rich and Martin, Mariusz utilised contacts within the local user subculture to further his understanding of use beyond information garnered through independent research. His approach here, however, is as significant as it was online, and we again see in the local context Mariusz's process of filtering opinions in action. Mariusz talks to "*the most sensible people*" regarding their experiences, and notes how he was able to pick these trusted opinions from the large number of individuals he was aware were using. It therefore becomes clear that there is a strong parallel between the approach Mariusz took online, with regards to accessing bodybuilding forums, and the approach he took offline, and as with his distrust of individuals such as GH15, Mariusz was careful to pay attention to who was recommending what in the local context as well: "*I talked to a few people, a few monsters... basically about like what they're doing, and how*", "*a few of the guys that I know are a good example of what not to do*" ('Mariusz', interview).

Mariusz was not alone in using others he observed in the gym as a means of determining what *not* to take, with Martin taking a similar approach to his use of PIEDs, which as noted above was somewhat cautious. In observing individuals who were on large doses of steroids for prolonged periods, Martin proffered that "*A lot of them do look ill. They're always getting ill, there's always something wrong with them... So that has led me to think, you know, maybe I don't wanna do [what they have done]*" ('Martin', interview). This demonstrates a type of subcultural learning that goes beyond mimicking peers, or taking the advice of experienced users within one's social group, demonstrating how learning often occurred for these individuals simply through a process of determining which of the people they saw training they would most, and least, wish to emulate. This form of learning can be compared to the literature regarding young adult

binge-drinkers, who determined 'rules' of use after observing things that could 'go wrong' if consumption was not conducted in a restricted or prescribed manner (MacLean 2016). In effect, Martin and Mariusz set their 'rules' regarding what dosages or durations to avoid, based upon observations of individuals who had negative experiences, and this perhaps played as significant a role in their cultural learning as positive representations of use.

Interestingly, in the context of determining the types of individual who were trustworthy or not when seeking information regarding PIEDs, Mariusz broke users down into similar categories to those identified in the methodology of this thesis, stating that one should "*not look for advice [on PIEDs] from body-builders, because they're the biggest idiots... they're the ones who disseminate the biggest bullshit as far as the information goes... [recommending] doses that no human being should be fucking touching... if you look for information from [power]lifters, then the stuff you'll get is a lot more fucking reasonable*" ('Mariusz', interview). Although competitive bodybuilders such as Big Steve would come under the 'sport-oriented' user-class identified in this research, Mariusz made clear he was not criticizing legitimate, competitive bodybuilders' knowledge with regards to PIEDs, clarifying that he was referring to "*not even the good bodybuilders, but the shit ones who never fucking go anywhere, but they look so much better than most people, they're the ones*", "[the] meathead with the shitty Superman tattoo" ('Mariusz', interview).

Mariusz's analysis demonstrates an in-group perception of the categories identified by this research, and as shall be demonstrated below, also appears to be a somewhat accurate summary of inter-group differences. From MF's perspective as a wrestler, powerlifters know a lot more about sensible PIED use than image-focussed users, who are routinely "*doing way too much*" ('Mariusz', interview), and do not have the same degree of knowledge as their strength-oriented counterparts. It is interesting in noting this to consider whether 'lifters' tend to be more knowledgeable in general than image-focussed individuals owing to their tendency, described above, to conduct independent research in addition to socially-acquired knowledge, thus ensuring falsehoods or misconceptions are rapidly corrected within their shared ethnopharmacology, or whether there are other influences that account for this inter-group knowledge gap. As noted earlier, age and educational achievement could be possible factors, however it is worth also considering the fact that competitive sportsmen have a need, to a greater extent than casual or hedonic gym-users, to plan their training regimen and diet strictly (Waddington 2000), which one might posit could lead to a similarly regimented understanding of PIED courses, such as that observed in Mariusz: "*I know how many [vials] I'm gonna go through, how many mil I'm gonna use a week, so I buy the exact amount for the duration of the cycle*", "*I note down every fucking injection, every single dose basically of everything, so I've got literally a journal*" ('Mariusz', interview). Indeed, since Mariusz was not the only respondent to notice a difference between the knowledge levels of the different categories of user, it can be presumed there is some causal link in the knowledge differences of these groups, assuming (as shall be demonstrated below) this is not simply a misperception on the part of sport-oriented respondents.

This idea of divergent subcultures sharing the same geographic space, and holding differing degrees and

types of knowledge, ties in with Putnam's (2001) theories of community, and can be considered with reference to Putnam's 'bridging' and 'bonding' forms of social capital, which have previously been considered in the context of such role-specific knowledge by Moroşanu (2016), with regards to immigrant communities accessing employment. Applying this theory to a social learning of drug use between subcultures, it would appear individuals in sport-oriented subcultures rely more upon the 'bonding' capital within their group regarding which advice and information they follow, with the 'bridging' capital with image-focussed users often derided as being of little worth (see above examples). The groups, however, still interacted and exchanged knowledge, and based upon Martin and Mariusz's cautions, it is apparent that this between-group 'bridging' knowledge was nonetheless valued by sport-oriented users, being frequently used as a measure of "*what not to do*" ('Mariusz', interview), and could additionally prompt further research, as in the examples cited regarding online forum posts by image-oriented individuals. The interactions of these distinct subcultures regarding knowledge exchange is therefore intriguing, with their apparently distinct, parallel ethnopharmacologies influencing and contributing to one another via this 'bridging' form of knowledge exchange.

This exchange of ideas shall be addressed later from the perspective of image-focussed users, when the impact of sport-oriented ethnopharmacology on their patterns of use shall similarly be discussed. For now, it is worth noting that this borderline contempt for knowledge originating in the opposing cultural category's ethnopharmacology was seen even to extend beyond individuals who might be criticised, as in Mariusz's examples, for possessing a genuine lack of knowledge, and applied to those whom an outside observer might assume to be a good source of information to parties from all subcultural groups, suggesting the possible existence of a Durkheimian (1893) conception of the out-group amongst some users:

"One of the [gym's] trainers asked me if I could get growth [hormone].... [when later] I offered to get him growth... he sent me a [text] like 'Oh, it's Kig[tropin]. Kig's shit... I want Somatropin'... If it's legit growth hormone, then who cares?" ('Rich', interview).

Rich here is critical of a personal trainer that works in his gym, who has a preference for a different form of HGH to that used by Rich, stating his concerns about the differences between the two types are unfounded, and that so long as the product is "*legit*", then the trainer should be satisfied. This appears to contrast with Rich's own opinions regarding steroids, where he complains that common substitutions, such as 'Deca' for boldenone, or 'T-Bol' for anavar, are problematic, because of subtle differences between the drugs ('Rich', interview; next chapter). Whilst this indicates that Rich has no problem with users having specific interests, even so far as 'esters' of different steroids are concerned, it also indicates the real complaint Rich has in the above example: that he does not value the PT's opinion, and feels that if powerlifters are happy to use Kigtropin ("[A former British powerlifting champion]'s using [Kigtropin], right now... and he says it's really good stuff" ('Rich', interview)), then clearly it is not the drug, but the individual questioning it, that is at fault.

This is confirmed by Rich's elaboration that he felt the trainer's comments were simply an excuse, made after changing his mind about going on HGH, and that the trainer had "*pussied out of it, or something*" ('Rich', interview). Even though Rich is very specific in his own patterns of use, and has preferences for drugs based on half-lives of esters, he nonetheless believes that an image-focussed trainer whose opinion differs from his own must be wrong, and therefore looks for a motive behind the individual's unwillingness to use the drug, attributing some pathology to him. Indeed, such is Rich's contempt for this trainer's opinion that he does not even entertain the idea that there could be some objective basis to the individual's complaint, summarising: "*I could go online and look it up, but you know... [why bother?]*" ('Rich', interview). An image-focussed trainer's opinion is worth so little when it contradicts that of his own powerlifting subculture's ethnopharmacology that it is not even worth considering as potentially having merit.

Although this was the strongest example of the manner in which sport-oriented users looked down on the ethnopharmacologies of their image-oriented peers, it is by no means unique to Rich, as indicated by Mariusz's earlier comments. Although Martin was more discriminating, also criticizing those within his own subculture who use "*too much*", he too was seen clearly to rank the opinions of powerlifters above others, indicating a perceived hierarchy of knowledge, existing both within, and between subcultures. This again demonstrates an element of Foucault's (1975) theory of internalised discipline, wherein a strict standard of 'cultural norms' is applied within the subculture, thus discouraging deviation from these norms of use. As shall be seen later this chapter, such 'internalised discipline' appears to be absent, or at least less prevalent, in image-oriented user subcultures, which were more chaotic (Burgess 1925) in how knowledge and norms were shared. It is possible, therefore, that the aggressive reactions against perceived "bad" methods of use originating from outside their subcultures, as in Mariusz and Rich's quotes above, is a subconscious way for sport-oriented users to ensure there are not "contradictory standards" within their group's ethnopharmacologies, allowing the maintenance of a "consistent pattern" of norms (Shaw and McKay 1942), ensuring users within this subculture follow the 'disciplines' prescribed. Such Durkheimian (1893) distrust of the out-group might therefore be nonetheless rational, and ensure a more informed approach to use continues to prevail within competitive user subcultures, thus minimizing harm.

This summarises the approach of sport-oriented users to the process of learning to use, whose research was thorough, critical, and grounded within subcultural norms. Knowledge was not often taken at 'face value' within this user group, even when the source of information was trusted, and a respected member of one's own subculture. In addition to the types of learning discussed thus far, therefore, there is one final method employed by those within the 'sport-oriented' category that determined which advice users incorporated, or discarded, in their own longer-term patterns of use, which must be addressed in order to understand this user group's process of learning in full.

Experimentation

Beyond independent (online) research, and social (peer-based) learning, the final means by which individuals in both user categories learnt to use PIEDs was through experimentation. As shall later be shown, the approach to this process varied across user categories, with hedonic users often applying no discernible methodology to personal experimentation, in contrast to the rigid methods of learning and improvement discussed here, further evidencing the 'disciplines' posited to exist within sport-oriented user subcultures, above.

Mariusz summarised this final means of learning thus: "*I used myself to be a guinea pig*" ('Mariusz', interview). Beyond learning through reading, and the experiences and advice of others, sport-focussed users were acutely aware that everyone's body reacts differently to compounds, and the only way to be certain how a drug would affect oneself was to try it. Mariusz therefore experimented with the compounds he took an interest in, following the above documented research, using the drugs in initially small doses, and in a cautious, planned manner: "*the most recommended thing to do [was take] one compound at a time*", "*in my opinion if you're doing something that gives you side-effects just don't do it*" ('Mariusz', interview).

Mariusz was quoted above as saying he kept a journal, noting down every injection he took, of every compound, for the duration of his cycles, and the above quotes illuminate the method he employed as a means of learning about compounds in the early stages of use. Mariusz would take one compound at a time initially, testing to see whether he experienced any negative side-effects from the individual compounds, rather than take multiple substances, and risk not knowing which caused any negative side-effects he might experience. Mariusz demonstrated this approach was effective: "*A lot of people do [Dianabol], and I thought I would try it, and I fucking hated it*" ('Mariusz', interview). By adding one compound at a time in a controlled manner, Mariusz was able to identify that 'DBol' gave him unpleasant side-effects, and as quoted above, took this as a sign to "*just don't do it*".

This method of testing through controlled, incremental use can be compared to the methods employed by "the grandfather of psychedelics" (Jewish Currents 16.06.2015), Alexander Shulgin. Shulgin's methodology for testing potentially psychoactive compounds developed in his lab involved using small doses, recording any effects, and then gradually increasing the dose over several days, until he felt he had a good understanding of both the effective dose for the compound, and the effects themselves (Shulgin 1991). Although one might suggest such a controlled mode of testing was more necessary in Shulgin's case, since having created the compounds, he was unable to draw on any forms of cultural knowledge already available, as is the case for drugs such as PIEDs, this perhaps makes it even more intriguing that some sport-oriented users adopted a similar approach to learning in the course of the present study, and again points to the strict 'disciplines' that form much of this group's behavioural norms (Foucault 1975).

Powerlifter Martin, as noted already, had by far the most cautious, methodical approach of all users surveyed. Martin's stated reasons for his approach were somewhat similar to Mariusz's, with his noting: "*I class myself as a beginner, to all this... I'm just seeing what happens, you know?... See how it affects me*" ('Martin', interview). The process by which Martin determined how compounds affected him is significant, however, as this illustrates the extent of his planning, and learning from, his cycles: "[I] started off... with natural test boosters, which everyone goes down, started off with all that, realised they were shit – yeah, done that" ('Martin', interview). 'Test boosters' (such as *tribulus* and *fenugreek* (see for example AnabolicMen.com 04.01.2015)), are not often classified as PIEDs, owing to their licit nature, and as Martin notes, minimal effects. However, it is worth noting that Martin used these products as his initial benchmark, against which harder PIEDs, such as steroids, were compared, and attempted to increase his performance using licit products, before progressing to actual PIEDs. The comment "*everyone goes down*" the path of using "*natural test boosters*" before commencing PIED use is also interesting, as it again relates to the processes of social learning, and ethnopharmacological knowledge, discussed above. Clearly for Martin, training in a powerlifting environment, everyone within the subculture is 'expected' to 'progress' in the gradual manner he identifies here, starting with 'natural' products, before progressing to more potent, illicit drugs. This can be contrast with examples, to be explored below, of image-oriented trainers commencing use of illicit PIEDS, such as steroids, without having been through a process of natural, and then 'test booster' enhanced training first, again illustrating the incremental, informed approach of powerlifters in comparison to such users.

Expanding on his progression from 'natural test boosters', Martin documents a similar path to Mariusz, regarding his process of learning: "*Then I went on to an anavar cycle, because anavar was always classed as the mildest, least side-effects. It's a good starter to do, so you can see how your body reacts. Then I done just a 'DBol' course, on its own, just to see how my body reacts*" ('Martin', interview). Martin here espouses the same methodology of learning by use of a single compound at a time, and recording its effects, that Mariusz recommends. This use was planned, measured, and had a definite purpose: "*Cos what I didn't want to do, I didn't want to take a multitude of chemicals, and not know which one's causing me sides, so I took each one in singularly*" ('Martin', interview).

Indeed, even Rich, who relied upon Jim for his initial advice on using PIEDs, nonetheless undertook a "test-only" cycle to begin with, as a means of assessing how his body handled this base compound, prior to adding anything else. Additionally, when he began using a compound (anadrol) that gave unpleasant side-effects, even though he was taking it at his more experienced supplier's suggestion, Rich took these negative effects as a sign he should change his approach, regardless of the positive effects he was also experiencing: "*I literally took [anadrol] for about seven days, and I could already see gains... But actually it made me kind of ill... they mess with your liver, so I came off those*" ('Rich', interview).

It is therefore clear that, within powerlifting circles, a principle of adapting one's use based upon experienced effects was the norm, and as noted earlier in relation to Rich's reaction to a negative

experience after ceasing use from a 'cycle', this principle did not stop at the point that one ceased using PIEDs. Indeed, as shall be demonstrated below, it was this adaptation to effects experienced when 'cycling-off' that really separated sport-oriented users from their image-focussed counterparts, who were often aware of a need to cease use of products that gave them negative side-effects whilst using them, but had a far less cautious approach to 'cycling off' (using post-cycle therapy drugs (see Evans 1997)).

As Mariusz noted, this precautionary principle of taking a slow approach to understanding the compounds he took individually before 'stacking' them, or increasing dosages, came at little cost, since "*within two weeks I could feel the results of it*" ('Mariusz', interview), meaning a small sacrifice in time was all that was required to offset the potentially harmful effects of using a drug without sufficient understanding of its effects. As shall be demonstrated below, this opinion was not always shared by those within the image-oriented user class, who often were not willing to take the time to thoroughly understand compounds prior to using them in higher doses, and relied more on the actions of peers than on their own research. This again highlights the more cautious, meticulous approach of sport-focussed users, highlighting the differing cultural norms observed between the distinct categories of user identified in this research.

In order to fully appreciate the cautious and informed approach of sport-oriented users, it is therefore necessary to contrast this group's actions with those of image-focussed, and hedonic users, and it is to these groups that this chapter shall now turn.

Image-Oriented Users

As previously noted, there were disparities in age and educational attainment observed between the principal categories of user, the plausible impact of which was discussed above. Although the overwhelming preponderance of young males in the image-oriented, and particularly hedonic user class undoubtedly has some influence on their approach to use, it is worthwhile nonetheless to compare these users to their sport-oriented counterparts from a culture-focussed perspective, since as shall be demonstrated, it appears to be a confluence of both personal and social factors that ultimately determine the manner in which individuals learn to use. This section shall therefore address the same elements identified in the 'sport-focussed users' section, in order to both highlight, and attempt to explain, the differences observed between these groups from a sociological perspective.

Time Invested Prior to Commencing Use

As discussed, it was observed that sport-oriented respondents spent a larger amount of time both immersed in a culture of use, and conducting research into the specific drugs they intended to take, than did image-focussed users. It was suggested above that a strong cultural norm discouraged competitive trainers in 'hardcore' gyms from commencing PIED use until they had attained a sufficient level in their sport, whilst for image-focussed users the period invested in training prior to going on steroids was a significantly less consistent factor, ranging from the years of training identified amongst some sport-oriented users, to mere weeks, suggesting a far less organised collection of cultural 'norms' (Burgess 1925).

Whilst some image-focussed interviewees had not actually commenced use of PIEDs at the time of interview, such as Dan, or had no plans to do so, as in the case of personal trainer Mark, who had investigated and subsequently dismissed the idea, other image-focussed trainers admitted to using PIEDs after exceedingly short periods of time, and it is this latter set of individuals that provide the most interesting focus with regards to this user group, as they differ so greatly in approach from the sport-oriented individuals cited above.

Gym user Josh, for instance, "*was probably training for about... three weeks to a month*" prior to commencing use of PIEDs, an exceedingly short period of time, in which he also acknowledged he did not conduct any independent research ('Josh', interview). Similarly, Simon notes that he spent only approximately one month conducting research into steroids, although had at least spent some time prior to this in an environment wherein use was commonplace, allowing him to acquire some degree of ethnopharmacological knowledge, in addition to the knowledge he gained through this short period of independent research ('Simon', interview). Simon notes, however, that he has a friend who "*never trained before*", whom he nonetheless supplied with steroids, and who had been on them for the entire period he had been training ('Simon', interview), something entirely unseen amongst sport-oriented users, even when one considers the young ages at which some high-level lifters were rumoured to have commenced use ('Rich', interview)³⁰. Additionally, comments made by 'Big Steve' (Field interview) and others in commercial gym environments ('Stephen'; 'Mark'; 'Robert') confirm that many image-focussed users begin taking PIEDs after such limited periods of time, when in Big Steve's words they don't even "*know how to train properly*" (Field interview), let alone use PIEDs in a sensible manner.

Pete's peer group of hedonically-oriented "lads" similarly appeared to have commenced use after very little time invested in either research, or natural training, with the sole exception of a friend who "*always wanted to take performance-enhancers, but... being in the military he couldn't*" ('Pete', interview). The majority of Pete's friends used casually, as shall be discussed, with Pete noting that this group "*have no issue putting stuff into their body*", and that some members had been using PIEDs since they were teenagers ('Pete', interview). Indeed, even in the case of the serviceman with whom he trained, Pete noted

that this individual's later approach to PIED use went as follows: "*as soon as he left, it was everything he could get his hands on. Like Smarties, you know what I mean?*" ('Pete', interview).

Taken in conjunction with anecdotal evidence of the young ages at which most of the individuals in this user category were identified as commencing training ("primarily 18 to 24", "as low as 16" ('Mark', interview); "17, 18, that sort of age" ('Stephen', interview)), and the "*transformation*"s that were observed in individuals who "*looked like a... little kid, basically*" prior to commencing use, but made significant gains in "*6 months*" ('Robert', interview), and these cases would seem to demonstrate the very different approach to commencing use endemic in this category of user, compared to the sport-oriented trainers discussed above. Clearly there was significant variation within this group, including individuals who were notably cautious in their approach, as shall be discussed shortly. However, it is significant that several image-focussed respondents admitted to commencing use an extremely short period after beginning training, or commencing research, and this marks the first notable departure between these user categories with regards to the learning process.

These findings demonstrate the observation that sport-oriented user subcultures have more rigid cultural norms, from which deviation is strongly discouraged (Foucault 1975), in comparison to a disorganised series of varying norms within image-focussed subcultures (Burgess 1925; Sutherland 1947), illustrated by the greater variance observed in patterns of behaviour in this user category (Shaw and McKay 1942). With this finding in mind, these divergent patterns of behaviour can therefore be explored in relation to image-focussed users' approach to independent, online learning.

Independent, Online Learning

In contrast with the degree of online research observed amongst sport-oriented users, those within the 'image-focussed' category did not generally undertake significant independent research, instead relying primarily upon social forms of learning, as shall be explored shortly. There was, however, an awareness amongst the majority of these users that the internet could be utilised for researching PIEDs, so even those who did not actively undertake significant research online at least were aware of this resource, and simply chose not to use it, for reasons to be discussed.

Prior to an exploration of the practices of 'hedonic' users, and members of the young male 'workout culture', it is perhaps first worth investigating further the story related by gym owner Stephen regarding a client who used clenbuterol for health, and image-related purposes, referenced in the previous chapter. This female patron of Stephen's gym began using clenbuterol ordered over the internet, for the purposes of losing fat. Upon discovering she was "*telling people [in the gym] to get clenbuterol off the internet*", a

shocked Stephen had confronted her, and he recounted for me the following exchange, and explanation: “*I had to say ‘you realise that’s a steroid?’³¹... she didn’t have a clue... You know, she’d been buying this ‘fat burner’ off the internet, and had been using it for probably over a year... wasn’t really aware of the risks... On the internet, it’s just so easy to get it*” (‘Stephen’, interview).

As noted last chapter, this story is reminiscent of Evans-Brown *et al.*’s (2012) findings regarding the growth in use of human enhancement drugs, demonstrating how those who use such substances outside of a competitive atmosphere are not generally informed regarding precisely what it is they are taking. Stephen’s comments regarding how the woman had simply “*been buying this ‘fat burner’ off the internet*” without knowing what precisely she was using indeed brings to mind cases where individuals have died doing the exact same thing (Guardian 21.04.2015), because they simply bought the product after reading positive reviews from other users, without conducting further research.

Although this type of user is not the main focus of the present research, it is nonetheless notable that individuals such as this are learning to use in a manner very different to that observed amongst sport-focussed users, suggesting any common patterns amongst image-oriented respondents indicating a more lax approach to information gathering are not merely the result of these users being primarily young men, who are more easily misled. Again, this supports the idea that a strong prevailing ‘norm’ of use contributes to the cautious, informed approach of sport-oriented users, since in this example where the individual simply conducted their own research online, without any surrounding social structure with a distinct ethnopharmacology, this led to a deviation from the research norms of the more homogeneous, sport-focussed subculture. This pattern can be observed amongst those respondents more typical of the image-oriented user category: young men who wish to become more muscular.

Simon, who trained for image to build self-confidence, used the internet to a limited extent in his initial research, having already spoken to users regarding what they recommended. As he stated: “*I researched for about [one] month online, decided [using steroids] was something I wanted to do*” (‘Simon’, interview). Although a month of online research would seem sufficient time to conduct an in-depth study of the compounds he was considering taking, putting Simon’s process in line with that observed amongst powerlifters, it became clear on prompting that in fact this research had been fairly rudimentary in nature, more closely mirroring that of the woman Stephen related the story regarding, than that seen amongst sport-oriented users: “*I typed in questions that... needed answering*” (‘Simon’, interview).

Whereas sport-oriented users frequently utilised a combination of forums (of which they were often dubious) and in-depth, scientific texts (see above), Simon’s process involved simply visiting a search engine, and typing in questions regarding the PIEDs he intended to use. Although important information could have been elicited this way, Simon did not exhibit the detailed understanding of PIEDs demonstrated by the sport-oriented users (as shall be discussed below). As physiotherapist Robert suggested in interview, although the rise of the internet meant that, for him “*finding out the practicalities, the benefits, to a certain*

degree the side-effects, or at least the myths, or common legends of performance-enhancing drugs is just so easy these days” (‘Robert’, interview), he nonetheless observed daily individuals who clearly did not know what they were doing with regards to PIED use. On why he felt the majority of image-oriented users found within the commercial gym in which he works had far less knowledge of PIEDs than he, as a non-user, had acquired, despite having access to the same resource, Robert theorised that it was due to a predominance of either lazy, or incompetent research practices: “*Probably most people just go to the top three links and not further... so if it's Bodybuilding.com or whatever, and they've read people's opinions on there... they're going to respect that, rather than science...*” (‘Robert’, interview).

As shall become apparent in the ‘social learning’ section, Simon did not appear to have read much valid scientific research regarding PIED use, and thus probably did indeed follow the pattern of research described by Robert, if he even went that far. When asked whether he ‘lurked’ forums to gather different opinions regarding drugs, Simon’s answer was telling: “*No, I'm not that bothered, really*” (‘Simon’, interview). This attitude could not be further from the sport-oriented users, who were meticulous, and most certainly “*bothered*” about proceeding correctly. Simon did, however, effectively utilise the internet to learn how to perform intramuscular injections, which he said he was forced to do owing to fears that visiting his local NSP might lead to word of his use getting back to the mother of his young daughter, who would not let him see her if she knew he used drugs (‘Simon’, interview). Thus, whilst Simon can be said to have been casual in his approach to learning about the physiological effects and dosages of PIEDs, he nonetheless was effective in conducting research into specific practical issues he felt were of importance. In this manner Simon did learn to use more effectively through independent online research, and indeed was safer for having done so than if he had merely guessed at how to inject. Whilst his case is far from that of the powerlifters therefore, Simon can still be said to have been cautious with regards to certain elements of use, and whilst he may have disregarded some of the effects of the PIEDs themselves (below), he equally was fully aware of risks such as infection, and took the necessary steps, given his family situation, to mitigate these (such issues shall be addressed in detail next chapter).

Simon was by no means representative of all image-focussed users, however, some of whom did take an interest in research, as evidenced by gym-goer Josh. Although having initially used in an hedonic manner without conducting research, with a group of friends as a teenager, Josh evolved in his approach to PIEDs as he grew older, and realised he had been “*naïve*”, and “*foolish*” in his past use (‘Josh’, interview). This realisation led Josh to begin lurking bodybuilding forums, where he noted the relationship between inexperienced users, and those who were more knowledgeable: “[On] *bodybuilding forums, you've got a lot of novices... that are... posting comments about how to do this, how to take this, what to take with... other forms of steroids. And... obviously there is a lot of professionals that are on there that know what they're doing, and they do tend to come back and give those novices a little sort of a 'heads up', sort of thing... a push in the right direction*” (‘Josh’, interview).

Although many sport-oriented users were critical of some of the recommended PIED courses posted on

such websites, it is nonetheless of note that Josh witnessed 'novice' users seeking to further their understanding by accessing these resources, and the evolution of a culture of 'social learning' appearing in 'online space' as a result (see Kozinets 2009; Evans-Brown *et al.* 2012). Whilst this does not suggest that image-focussed users conducted research to the same degree as the sport-focussed respondents who dismissed the advice of many of these forums, it nonetheless shows the way in which users learned the process and ethnopharmacology, even when not occupying the literal subcultural environment, of bodybuilders and other experienced users, and demonstrates that image-oriented users do not all simply use whatever they can access without regard for the effects, as Josh admitted having done as a younger man.

The same, however, cannot be said for Pete's "*close-knit group*" of friends, who were frequently involved in "*social media culture*" ('Pete', interview). Although on the fringes of this culture, Pete was nonetheless insulated enough from its effects, as a strength-focussed trainer himself, to offer a critical perspective on the lifestyle encouraged by such online associations, where he noted recommendations were not based upon the actual physiological effects of drugs, but more grounded in an attitude of: "*Do this! You can live my life, and see how great I've got it!... Wake up in the morning and look good*" ('Pete', interview). In our discussion, Pete made frequent reference to the social media obsession he witnessed amongst his friends, and noted how he believed much PIED use was "*at the moment... rife, because of social media*" ('Pete', interview). In explaining just why he felt this new online culture was so harmful to young men, Pete noted how, on social media: "*people are sort of, hyping it all up... and you don't see the side-effects... No-one wants to put themselves down on social media*" ('Pete', interview; see Bleeker 2014).

Although Pete's friends did not wish to participate in interviews themselves, and thus the exact advice they received from these sites is not known, Pete felt a lot of poor-quality advice was circulated within these groups, and as physiotherapist Robert similarly noted (Field diary 18.05.2016), individuals were not likely to post when things did go wrong for them, as a part of this concept of portraying one's "*best self*", meaning bad information is likely never truly rebutted in these online spaces. This builds upon the negatives some competitive users attached to bodybuilding forums, but perhaps hints at a greater capacity for harm, owing to the nature of individuals instinctively seeing Facebook and other social media acquaintances as 'friends', and therefore perhaps trusting them more implicitly than one would an anonymous bodybuilder, such as 'GH15' (see Bleeker 2014). Such a suggestion would indeed seem to be supported by Pete's assertions made in relation to the 'social learning' process amongst his friends, the form of learning to which this chapter shall now turn.

Social Learning; Ethnopharmacological Knowledge

Gym-user Josh serves as a good example of how social learning occurs within the image-focussed user population. Having initially commenced training as part of a group of young males with a certain group ethnopharmacology, but later moving away from this group, and becoming critical of his past “*abuse*” (‘Josh’, interview), Josh’s insights into this earlier period are reflective, and therefore offer some of the greatest clarity on this element of the learning process for such ‘hedonic’ users.

As noted previously, Josh initially gained access to PIEDs through friends, who were already using when he began training. Having established that his friends were using, and could supply him with PIEDs, Josh began to use simply the drugs they recommended, without further inquiry: “*I was just going with what the other lads were telling me to do... I didn't really know about steroids, I didn't really research them*” (‘Josh’, interview). This noticeably contrasts with the attitudes of sport-oriented users cited above, and is indicative of the significant differences in approach to use seen across the two groups. Whilst powerlifter Rich relied on the advice of a friend in instructing him how to use, it was clear that the friend, Jim, was qualified to give such advice, and ensured Rich understood precisely what he was using, and the effects he could anticipate. In Josh’s case, however, the exchange of knowledge between peers was far more limited, suggesting very different norms in approach to use between the two groups: “*you're meant to come off, go back on, you're meant to do other stuff to get your testosterone levels back to normal... [I] didn't know anything about that till later on... But yeah, now researching it... lots of people can run into all sorts of problems*” (‘Josh’, interview).

This sentence concisely summarises the learning process Josh experienced in gathering knowledge on use from his friends, fellow teenage boys. Although he has since researched the topic (Josh’s later use shall be addressed shortly), and discovered principles such as ‘cycling’ PIEDs (next chapter), and the use of ‘post-cycle therapy’ drugs, Josh notes that he “*didn't know anything about that*” when he began using, summarizing the learning process at that stage as follows: “*I asked [my friends], they've turned around and said to me they're taking... two types of steroid*”, “*I've taken something [they] told me to take... didn't do any research*” (‘Josh’, interview). Whilst powerlifters both had an informed ethnopharmacology, and a pervasive internalised social norm that dissuaded use without extensive prior knowledge acquisition, it is clear that image-oriented users inhabit a far more diverse landscape of knowledge, and norms (Burgess 1925), and are therefore less likely to follow a set, cautious pattern of use.

This ‘disorganised’ pattern of norms was indeed evidenced in Josh’s own observations of social learning within his local gym, which demonstrate how learning within a commercial gym space lacking the normative subcultural ‘discipline’ of ‘hardcore’ gyms can evolve through inter-group, ‘bridging’ bonds (Putnam 2001), between groups with otherwise diverse norms of use. Following his initial usage under the advice of his friends, Josh described how he later: “[learned] from other people... in the gym... sort of atmosphere that's around me... they've been doing... hard steroids and stuff like that for a number of years, and they're... in the bodybuilding scene... so they take a lot of stuff for competitions... and... if you've chosen to go down the path and do steroids for bodybuilding... there's certain knowledge you need to know, and these [are the]

guys I've got my knowledge from" ('Josh', interview).

Contrast this quotation with Josh's previous statements regarding learning to use from his friends, individuals aware only of the potential positive effects of steroids, and not aware of specifics of use, or remotely cautious in their use, and it can clearly be seen that the two ethnopharmacologies in Josh's local environment differ greatly. Josh extended his knowledge from simply being aware of the potential gains of steroid use ("*I decided to do the injections, cos the other guys were getting more hardened muscle... which was through the test*" ('Josh', interview)), to consulting those users likely to have an informed understanding of the more specific nuances of use, in the form of competitive bodybuilders, thus contributing to his overall understanding of the essential processes of use: "*I like to think I'm a bit wiser now*" ('Josh', interview). This illustrates both the lack of a consistent behavioural norm in his 'commercial' gym environment, in addition to demonstrating how a shared environment can facilitate knowledge transfer across subcultural groups, in this case "*lads*" involved in "*workout culture*", learning through interaction with competitive bodybuilders. As Josh comments, his approach to use greatly changed following his exposure to better-informed users from a parallel, yet distinct subcultural group, and as a result he has helped incorporate such knowledge into his own group's ethnopharmacology: "*Now, a lot of people ask me, and I give them advice... obviously tell them about what I did at 18, 19, and they're that age now... I steer them, sort of, in the right direction*" ('Josh', interview). This demonstrates how 'bridging' forms of knowledge transfer between groups, discussed above, can contribute to an evolution of the ethnopharmacology of a subculture, through exposure to another culture's practices.

Since Josh initially used PIEDs at a younger age than any of the sport-oriented respondents, however, it might be questionable the extent to which spaces where image-focussed use is the norm actually have more chaotic ethnopharmacologies than 'hardcore' spaces, as opposed to simply attracting younger, less-informed individuals. To evidence the observations made above, therefore, it is instructive to investigate the case of an older user within such a 'commercial' gym environment, Simon, who did not train as part of such an 'hedonic' group, as this shall help establish whether cultural norms in such gym environments really does have any notable effect on patterns of use, or whether age and temperament are more significant factors in determining how individuals learn to use.

Although conducting limited research online, Simon gathered the majority of his knowledge of PIEDs through social interactions, both in prison, where he was first introduced to a culture of lifting weights, and the gym. In his words: "*I was in prison... for a year, and... all the time I was in there, all the guys spoke about taking steroids. So, I research and researched – while I was in prison... asked as many questions as I could*" ('Simon', interview). A prison gym could perhaps be considered the quintessential 'closed' subculture, so far as advice regarding training regimens and methodologies of PIED use are concerned, since the environment exists without 'bridging' bonds to other social groups with differing ethnopharmacologies, as could be anticipated to occur in other settings (Putnam 2001). Although individuals with past experience in PIED use from different backgrounds might be incarcerated together, the fact that considerable constraint is likely to

be imposed on use by the availability and price of compounds, based upon how easy they are to smuggle into the prison, is likely to lead to a more homogeneous ethnopharmacology (see Coomber 1997*i*). One might therefore expect advice offered in such an environment to be relatively consistent. Although Simon appears to acknowledge the veracity of this suggestion in this portion of his interview, the manner in which he reacted to this environment of use in prison is perhaps worth exploring further: "*the people I was training with inside, they were taking... tablets, anadrol, in prison. But I didn't want to take that, because I didn't feel like I knew enough about it*" ('Simon', interview).

Simon here acknowledges that there was only a single steroid in common usage within the prison environment, a tablet-form compound, as might be expected, and his peer-group all took this drug. As acknowledged in Simon's first quotation in this section, whilst he was training with this group he questioned them on their steroid use, attempting to gather all the information he could from them. In spite of this group's presumably having a shared routine of use, and collective ethnopharmacology, Simon nonetheless waited until leaving prison before going on PIEDs himself, since he "*didn't feel like [he] knew enough*" through only speaking to the individuals he trained with inside ('Simon', interview). This might indicate a degree of caution on Simon's part, and a desire to be informed about anything he puts in his body, as was the case with the sportsmen discussed in the first part of the chapter. As noted above, the extent of Simon's online research was limited, consisting of merely typing questions into a search engine, a methodology seen amongst some subjects in Evans-Brown *et al.* (2012), and strongly criticised by physiotherapist Robert. In spite of this limited independent research, however, it is clear from Simon's comments that he was somewhat discriminating in his approach to use, and therefore the further research he conducted upon leaving prison, but before commencing use of PIEDs, is worth considering, since it clearly departs from Josh's experience of simply using whatever his immediate peers were taking, and suggests a more nuanced approach that is perhaps closer to that seen amongst sport-oriented users.

Simon's offline research approach appears to have involved questioning members of his peer-group outside of prison, to a point of perceived sufficient information saturation, or 'satisficing' (Simon 1956): "[I] asked a lot of people I know who take [PIEDs] about their advice, what to do and how long to take them. And then once I felt I had enough information... I started taking them myself" ('Simon', interview). Indeed, this process of information acquisition appeared to have an effect, given Simon, when he did commence use, did not use tablets, as his prison-based peers had done: "*I just went straight on injections*" ('Simon', interview). Given the hepatotoxicity of oral steroids is a well-documented phenomenon (Mottram 2005; next chapter), it appears Simon's approach to PIED use was indeed discriminating, and he sourced and acted upon valuable information in the course of his further, subcultural research. This could suggest that Josh's experiences of use were not the norm for image-oriented users, merely reflecting his being a teenage male at the time, and thus more inclined to take risks, and disregard harms (Arnett 1995; Gardner and Steinberg 2005).

Indeed, in addition to taking this more cautious approach, Simon further offered examples of using his

knowledge of PIEDs to assist peers who were not so well-informed: “[A friend] was on them for too long... he was injecting testosterone every other day, and I kept telling him ‘you’re not meant to inject testosterone every other day’, he said ‘I don’t care’... he just wanted to do it his way. Then one day he read up online and he goes ‘ah, fuckin’ hell, I just read you’re not meant to do this every other day’ and I went ‘I did tell you that’” (‘Simon’, interview). Simon can here be seen to both be critical of the friend who ignores his advice, in addition to demonstrating his own contribution to the evolution of the ethnopharmacology of his local gym environment, as Josh was noted as having done. Having acquired some knowledge regarding sensible PIED use, Simon advises others whom he feels are not using in a sensible manner on how they can improve their patterns of use, thus contributing to their learning process, and the norms of the culture as a whole, further supporting a notion of ‘cultural transmission’ from older, more experienced users to others within the local subcultural environment (Shaw and McKay 1942). This would seem to indicate that, although there are some instances of egregiously flawed, or even dangerous PIED use amongst some image-oriented users, as identified by several sport-oriented respondents (above), these are corrected when noticed by more experienced, or informed users, and thus might not inherently reflect the attitudes of this user category more broadly, but simply represent the more ‘chaotic’ nature (Burgess 1925) of commercial gym environments when compared to ‘hardcore’ lifting gyms.

In spite of Simon’s apparently informed, cautious approach cited above, however, it became clear in the course of our interview that he was in fact severely lacking in basic knowledge regarding use, in comparison to the sport-oriented users, and not only ignored good advice for foolish reasons, but simultaneously followed poor-quality advice of the type Mariusz and Robert would term “*Broscience*”, thus suggesting that, although he had done more research than his misguided friend, Simon still lacked what the sport-focussed users would consider the requisite minimum knowledge to be using PIEDs. This is most clearly evidenced in Simon’s approach to taking ‘post-cycle therapy’ drugs: “*people told me to take a PCT course, of... nolvadex and clomid... but I never did... people I know who have been taking gear since they were like 18, who are now 30, they’ve never taken it and they look absolutely fine, so I just thought ‘I’m not gonna bother’... and I’ve never taken any PCT*” (‘Simon’, interview).

This serves as a perfect illustration of Simon’s overall approach to PIED use, in spite of his apparently rational initial approach to research. Although Simon’s peers who did not use PCT often looked “*fine*”, he personally was affected by this neglect, stating of the experience of coming off: “*I stopped going gym for about a year... just got really depressed*” (‘Simon’, interview), likely demonstrating that his neglecting to use PCT based on these individuals’ experiences was a serious mistake. Unlike Rich, whose reaction to an unpleasant post-cycle experience was referenced above, however, Simon was so dogmatic in his belief that a PCT course was unnecessary, based only on observing others in his gym who claimed not to use such drugs, that he refused to learn from his experience, something the sport-oriented users would have considered unconscionable:

LT: So... this time around, would you take PCT then, in case that depression was linked to coming off?

SM: No.

LT: No?

SM: No, I won't.

('Simon Marsh', interview 19.05.2015)

Although one might be inclined to conclude that Simon is simply a particularly stubborn, or indeed foolish individual, and not representative of image-focussed users more broadly, physiotherapist Robert noted in interview that he witnessed such behaviour frequently amongst image-oriented users: "*half of them don't want to listen [to advice] anyway... a lot of people doing it are not the bright ones. Like when they do it and say 'oh, I feel like shit, really depressed' and all this. 'So, are you going to do it again?', 'yeah, definitely'. You know, if they can't learn from cause and effect...*" ('Robert', interview). Being familiar with users both through his employment, and his gym-oriented leisure activities, Robert's comments strongly suggest that Simon's behaviour in not adapting following a negative experience, and not learning to use in a sensible manner, was indeed common in the broader image-oriented user population.

It is additionally worth noting another of Simon's behaviours, which again is indicative of some of the profoundly misinformed advice found within casual user-subcultures, such as the one to which he belongs: "*I've been told also not to take energy drinks while on steroids, and I don't know why that is, but I don't take energy drinks cos someone told me not to*" ('Simon', interview). Even the most cursory examination of this suggestion reveals it as absurd³², however it seems that this strange piece of advice, with zero supporting evidence, was followed by Simon simply because he trusted the source, as he trusted those individuals in his peer group who said PCT was unnecessary, even though others cautioned him that he should plan one. Although Simon is a particularly stark example of the misinformation found amongst some image-oriented users, the fact that there were people supplying him with such misinformation (and further that Simon was advising others regarding use, as referenced above) suggests that this is not a unique case, and that the "*broscience*", referenced by more-knowledgeable PIED users in their criticisms of some user-subcultures, is indeed a real phenomenon.

Relating Simon's situation to subcultural theories, it is interesting to note the ways in which Simon was exposed to contradicting advice. Burgess (1925) theorised that delinquency was caused by 'social disorganisation', and whereas powerlifters in a 'hardcore' gym environment are exposed only to 'definitions' (Sutherland 1947) favourable to cautious, intelligent use, Simon clearly was exposed both to individuals cautioning him to use PCT, as well as numerous persons telling him it was not necessary. If 'delinquency' is here equated to 'abuse' of steroids (see Monaghan (2001) for discussion of 'use' versus 'abuse'), then it would seem the 'disorganised' space which formed Simon's subcultural environment could easily have led to his 'abuse', as per Burgess's (1925) thesis. Indeed, Shaw and McKay (1942) established in their framework that delinquency was often related to an individual's being "exposed to a variety of

contradictory standards and forms of behaviour rather than to a relatively consistent and conventional pattern" (p.172), which in Simon's case is clearly displayed, in the dismissal by many of his peers of the need to use PCT, in spite of the "*people [who] told me to take a PCT course*" ('Simon', interview), whose comments would have formed a part of the 'consistent and conventional' pattern in a more sport-oriented, 'hardcore' gym environment.

Further, Burgess and Akers (1966) extended E. Burgess's (1925) theory of 'social disorganisation' to relate to learned delinquent acts, suggesting that, as per Sutherland's (1947) 'excess definitions', an individual exposed to more messages supporting departure from cultural norms in a particular practice or act, in this case sensible procedures for undertaking steroid use, will be more likely to depart from this norm than an individual in an environment where such messages are less prevalent. This process of 'differential reinforcement' (Burgess and Akers 1966) would help explain further why Simon followed the advice not to take energy drinks, offered by only one individual, when he did not follow the far more important advice to undertake 'post-cycle therapy', where he heard contradicting views, and followed what he believed to be the dominant, and therefore 'correct' protocol, in not using PCT: In the case of energy drinks, Simon was exposed only to definitions that opposed taking risk, whereas in the case of using PCT drugs, he received more definitions unfavourable to use than supportive of use (Burgess and Akers 1966; Sutherland 1947).

Naturally, there are other factors involved in shaping an individual's process of use than environment, as suggested at the beginning of this chapter. Hirschi (1969), a social control theorist, posited that many factors attributed to definitional or social motives could in fact be explained by individuals predisposed to certain behaviours searching out peers with similar dispositions. By this measure, it could be suggested that Simon was simply more inclined towards casual, risk-taking PIED use than the sport-oriented interviewees (who despite having a rigid local ethnopharmacology were nonetheless similarly subjected to contradictory viewpoints during online research), and hence sought out an environment where his outlook would match the dominant narrative. Whilst some degree of 'peer preference' (Coggans and McKeller 1994), based on pre-existing personality traits (Hirschi 1969) may well have had some influence on Simon's actions, however, it is nonetheless clear that Shaw and McKay's (1942) theory of response to exposure to contradictory patterns of behaviour can be applied to Simon's case in a meaningful way, since were he placed in a sport-dominated ethnopharmacological space, it appears clear from his interview he would have followed the cautious approach, were this the only pattern of behaviour on display within his subcultural group (as evidenced by the 'energy drinks' example).

What can be said, therefore, is that a mixture of confusion, arising from multiple sources giving contradicting advice, behaviour patterns learned from peers, drawn from the dominant definitions of Simon's cultural, 'commercial' gym environment (Sutherland 1947), and perhaps some degree of personal disposition (Hirschi 1969), all played a role in determining Simon's pattern of use. The last of these issues shall be addressed towards the end of this chapter, in relation to the case of Eddie Michaels, a user training for image purposes who exhibited traits more in-line with those observed for 'sport-oriented' users. For

now, it is worth furthering the discussion of the social learning observed within image-focussed subcultures, and extending this to the groups of 'hedonic' young male users of whom a number of respondents spoke, frequently with criticism.

Pete's peer network serves as the perfect subject for such an exploration, as this friendship group is drawn from a diverse background of manual labourers, servicemen, and sponsored 'fitness models', yet all form a part of the hedonic "lad culture". This group consequently offers a good indication of culturally encouraged, and therefore socially learnt behaviours, witnessed within this subculture, and Pete's observations of this group, when combined with 'outside' observations from other gym users and staff, therefore offer valuable insight into how this subculture acquires, and applies their knowledge of PIED use, thus offering real insight into the social factors that influence the rise of separate ethnopharmacologies between subcultures.

The attitude of Pete's friends towards PIED use is perhaps best summarised in the following quotation: "*these lads, they've got no issue putting stuff into their body*" ('Pete', interview). In interview, Pete detailed the extraordinary approach his friends took to PIED use, which was not only casual and ill-informed, but undoubtedly outright dangerous. The philosophy of "*well, I'm gonna die sooner or later*" espoused by Pete's friends ('Pete', interview) is epitomised by the fact that three members of this close-knit social group have significant health issues (detailed next chapter), yet still use steroids, in spite of the risk this brings. This attitude towards use even in the presence of noticeable damage to health was additionally discussed by Robert (interview) and Josh (field diary 27.03.2015) in relation to individuals they knew who trained locally, evidencing this is by no means a constrained phenomenon within one specific friendship group.

Beyond the casual manner in which Pete's friends undertook PIED use, the actual level of knowledge displayed by these individuals is highly suggestive of the amount of effort committed to researching the drugs they take. Although Pete occasionally made reference to his friends being knowledgeable regarding certain areas of use, it is clear this subcultural group is subject to the same information gaps as were both Simon, and Josh in his early, teenage use. Regarding his friend 'Mike', Pete noted how "*once you've done your course, you're supposed to take other drugs, to bring your natural [hormones back to normal] ... he doesn't do that*" ('Pete', interview). Noting the effect that ignoring the need to undertake post-cycle therapy had on his friend, Pete commented: "*however long he does his course, once he stops, all of his mass, all of his muscle, will just fall off him*" ('Pete', interview). As noted above, powerlifter Rich had a bad experience coming off steroids (including losing a lot of weight following cessation ('Rich', interview)), and used this as an indication he needed to conduct more in-depth research, to ensure it would not happen again. This was contrasted with Simon's reflections on his own negative experiences, which seemed on the face of things an astonishing reaction: an utter refusal to do anything differently, to "*learn from cause and effect*" ('Robert', interview). 'Mike' therefore far more closely mirrors Simon in this area of use than he does Rich, again evidencing the divide between sport-oriented, and image-oriented patterns of use: "*He'll just...cycle twice*

as hard as what he did last time... taking twice as much as he should, just to get his size back, cos he's panicking cos he's lost it" ('Pete', interview).

What is intriguing in this case, unlike perhaps Josh's, is that there is patently no issue of a lack of information reaching the individual involved, since Pete is fully aware of the need for PCT, and is a close friend of the individual in question. This suggests Mike's excessive, ill-planned PIED use is nonetheless undertaken with an awareness of potential harms, indicating the knowledge supplied is simply discarded, as was observed with Simon (above).

For his part, Pete suggests that much of the use seen within 'hedonic' user subcultures comes from a desire to portray a more positive image than reality, something he equates with 'social media culture'. In discussing the type of talk heard within the scene, Pete notes how "*No-one promotes the side-effects... it's: 'You're gonna be massive'*" ('Pete', interview). Relating this to the above point, therefore, it could be posited that the wealth of individuals portraying PIEDs positively, and glossing over side-effects, within the 'workout culture', has a more significant effect on the process of use amongst Pete's peers than his own cautions that this subcultural belief is false. This again would seem to suggest that Sutherland's (1947) thesis regarding the balance of 'definitions' in favour of, or opposed to a certain manner of acting, is applicable to decisions regarding PIED use, and therefore shapes the learning process of those involved in image-oriented subcultures. It is important to note in making this observation, however, that Pete himself does not partake in PIED use, and has acquired a different set of beliefs regarding use to that of his friends, again suggesting factors besides one's cultural environment contribute to an individual's approach to PIED use.

As noted last chapter, although belonging to this group of "lads", Pete's intent in training is principally strength-focussed. As such, it is worth considering whether he has internalised more of the norms related to fellow strength-focussed athletes, such as powerlifters, than his immediate peers, given his critical attitude towards the steroid "abuse" he observes in his subculture. Although this issue was not probed in-depth in our interview, Pete acknowledged both that he looked up powerlifting routines, such as Louie Simmons' program (LouieSimmons.com) online, and also that a major influence in his perception and knowledge of PIEDs had been the documentary '*Bigger, Stronger, Faster*' (Bell 2008*i*), directed by the brother of US powerlifting champion Mark Bell, and thus largely utilising the sport of powerlifting as the framework for its discussions. This is interesting to note in conjunction with both Josh and Mariusz's comments regarding sport-oriented competitors sharing social space with hedonic users (above), and might therefore indicate the personality of the individual affects patterns of use more than any lack of knowledge owing to local ethnopharmacologies. This might suggest hedonic-type users are not so much ill-informed regarding sensible PIED use, as they simply do not care.

Last chapter, it was posited that hedonic users were involved in a 'zero-sum' game when competing for status, based on the appearance of their bodies relative to others, and therefore had strong motivation to use PIEDs. The evidence presented here suggests this theory is additionally applicable to the process of

learning to use PIEDs: Pete does not 'compete' in this process, so is free to adopt a more cautious approach than those who are involved. As such, although Pete offers advice regarding use to his friends, they ignore such cautions, since the potential gains that are seen to be achievable through PIED use weigh more heavily in their decision-making than the negatives Pete highlights. In effect, although these individuals have been exposed to the relevant information, because it does not fit the narrative they have created for themselves with regards to the benefits of using, such knowledge is discarded. This form of *confirmation bias* appears in much psychology (Haidt 2012) and behavioural economics (Ariely 2008; Kahneman 2011) literature, and the finding that such processes arise within user subcultures perhaps offers further insight into subcultural theories of learning.

In contrast to Sutherland's claim that an "excess of definitions favourable to violation of [norms] over definitions unfavourable to violation" (p.6) leads to delinquency, from Simon and Pete's interviews, it appears plausible that simply definitions that violate 'norms' *and suit the individual's desires* need be present, regardless of whether they exceed definitions unfavourable to violation, for an individual to depart from a suggested norm. By bringing the sociological literature on subcultural learning into alignment with psychological theories, an explanation for the difference in investment in knowledge between powerlifters and hedonic-users becomes clear: whilst sportsmen need to ensure longevity to remain competitive, image-focussed users need only use because "*summer in Ibiza's coming*" ('Pete', interview). This means users in the two groups discount harms at different rates (Ariely 2008; Kahneman 2011), with sport-oriented users thinking longer-term (thus having a lower time-preference) than their image-focussed counterparts.

In discussing this *confirmation bias* phenomenon, physiotherapist Robert noted that a problem amongst image-focussed users was: "*myths and legends they persuade themselves of: why and what and how it works, you know?... 'Why do [you] do that?', 'cos Bob said', you know?... and... 'just cos the big guy at the gym has done 'X', it's gonna do exactly the same for you'*" ('Robert', interview). In Robert's experience, these 'myths' became lore owing to their convenience for users. Robert witnessed this both with regards to patterns of use, as well as the manner in which individuals convinced themselves that PIEDs were not a form of "cheating", thus justifying their use. On the latter, Robert noted how, with regards to image-focussed users: "*they'll all [try to] convince you that 'actually being on gear's a burden, because... you have to train harder and work harder, all it does is give you faster recovery rates so you can repair faster and get back in faster and make more gains'. Uh, deluded. The lack of understanding on physiology...*" ('Robert', interview). Although perhaps not strictly harmful, this case illustrates how a convenient idea can become 'common knowledge' within a subculture, owing initially to confirmation bias amongst a set of users, developing into a cultural 'meme' (Dawkins 1976) amongst all users with a certain ethnopharmacology.

Robert offers a further example of a case where the generation of such 'myths' has proved harmful, noting how hedonic users "*ALL seem to be suffering from the myth*" that simply using "*twice as much*" will allow them to overcome plateau, and make constant improvements, as opposed to the truth of needing to factor in "*neurological fatigue*", de-load, and rest, as he notes powerlifting routines, such as "*Westside Barbell*"³³

encourage ('Robert', interview). Indeed, Robert notes he was explicitly told by one user that "*the more he puts in, the better...*", which led the individual to "*just [use] way more than he needs to*" ('Robert', interview). Robert was concerned that this individual was a role model in the gym, having achieved some minor success (one of Mariusz's "*bodybuilders... who never go anywhere*"), and so contributed to the misinformation of youngsters he advised based on his own use, despite having ruined his own health through his poor choices. Robert summarised the situation by stating "*He's not a bad person... just a complete idiot*" ('Robert', interview).

Confirmation bias led to the creation of myths, which became memes, and influenced those susceptible within the subcultures they inhabited. With the learning processes identified by Shaw and McKay (1942) allowing the transmission of these myths across groups, and generations (as in the case cited here by Robert), and the lack of a strong cultural norm either prohibiting or encouraging certain behaviours, as observed in the Foucaultian (1975) / Durkheimian (1893) model relevant to sport-oriented users, the reasons for the different ethnopharmacologies of image-oriented users become apparent. Although factors relating to an individual's personal disposition (Hirschi 1969) have yet to be addressed in detail, it is now clear the factors which affect the distribution of knowledge across the categories identified in this study.

Hirschi's (1969) theories, and ideas of peer 'preference' versus 'influence', shall be discussed shortly. First, it is worth considering a further factor in the transfer of knowledge that will help explain more fully the situation present in the using subcultures found within 'commercial' gyms: learning by 'cultural transmission' from personal trainers.

Personal Trainers (PTs) and Authority Figures

Shaw and McKay theorised that much delinquent behaviour was learnt from respected members of subcultural groups, passed on to more recent, or lower-level members, in the form of 'cultural transmission' (1942). Whilst Mariusz's assessment of young men taking advice from "*shit [amateur bodybuilders] who never... go anywhere, but they look so much better than most people*" ('Mariusz', interview) suggests a certain type of misguided 'cultural transmission', of norms 'deviant' to the more serious competitive-user subcultures, it is significant to note that, even above amateur bodybuilders, commercial gym environments have a visible and obvious authority figure, in the form of PTs, to whom inexperienced individuals might turn for advice regarding PIED use. In the words of Eddie Michaels, an image-focussed trainer who, as shall be discussed, did not rely upon this means of learning, it was evident nonetheless in his experience that "*Overall, I know most trainers understand [people will ask them about PIEDs], cos it's part of a gym*" ('Eddie', interview). This section shall therefore address ways in which image-focussed respondents acquired knowledge of PIEDs through PTs, and the results. It is worth noting that not one strength-focussed athlete

reported following this means of knowledge acquisition, making such learning unique to the image-oriented user population, within the present research.

Mark Osbourne, a PT in a commercial-type gym, was quoted last chapter as having observed other PTs both selling, and offering advice on PIEDs to clients, and felt many individuals chose to patronise a PT they believed to be using PIEDs to gain access to drugs through that individual. Whilst he acknowledged the effectiveness of this approach, Mark was unenthusiastic about the quality of information these PIED-using PTs gave clients: "*I think there are less trainers than should be... that can... give correct, safe information... that should be given, should [clients] really decide that this is the path that they're gonna take*" ('Mark', interview).

Describing the process of individuals who accessed both their PIEDs, and information regarding them, through PTs in his gym, Mark highlights the negligent approach adopted by such individuals, in comparison to the serious lifters he saw more frequently in the past, before the growth of 'workout culture': "*people were very specific in what they were taking, and they were careful, they would do a lot of research and have knowledge into it. Now, it's more of a case of 'speak to my trainers, what's the quickest fat burner you can get hold of for me? Let's take it now'... they'll take whatever dosage they're being told by their trainer. Whatever they say, they do... and they could be completely wrong*" ('Mark', interview). Mark here again demonstrates the manner in which the supplier is relied upon to give information on usage, giving them motive to sell the customer products they do not need, or recommend excessive amounts, simply to increase profit. It was noted above, in comments by Mariusz and Rich, that within powerlifting subculture, where a strong cultural norm prevailed, suppliers could generally be trusted to give accurate information to potential customers, even at the expense of a sale. This was related to a Foucaultian (1975) theory of discipline common to 'hardcore' user subcultures. In the case of PTs, however, Mark makes clear that such a prevailing norm does not exist, stating of such business practices: "*that's not uncommon*" ('Mark', interview).

Although Mark acknowledges that recommendations of excessive dosages might simply be due to lack of knowledge amongst trainers, he nonetheless notes the profit motive in such transactions: "*there was a trainer... training a client... and... he'd given the trainer one-and-a-half thousand pounds*" for "*six months' worth... of anabolic steroids*" ('Mark', interview). Given the excessively high cost of this 'cycle' relative to the prices given by sport-oriented users (chapter three), it is clear the trainer in this instance either greatly inflated the prices of the products he sold on, or recommended an exceptionally high dose to the individual in question. Either way, it can be inferred the trainer here was placing his own financial gain before the client's health, and this additionally demonstrates how willingly image-focussed users will follow the advice of PTs without a second opinion, since no serious user would ever recommend spending such a large amount on a six-month cycle of PIEDs ('Big Steve', field interview; 'Jim', interview; 'Mariusz', interview).

Additionally, Mark recollected a case where the relationship worked in reverse, with a PT friend of his

purchasing PIEDs, and taking advice on use, from a client. As Mark recalls: “[The client] talked his trainer into buying it. His trainer took it for a couple of months, got great results, you know, got big, got shredded, got what he wanted – probably got in the best shape of his life. Stopped taking it, and... that was where it all went wrong for him, you know? Couple of months later he lost his job [owing to depression]” (‘Mark’, interview). As Mark tells it, the seller had apparently told the trainer exactly what to take when ‘on-cycle’, but had not mentioned post-cycle therapy to him. The trainer had done no further research, and upon cessation of use, was hit with severe symptoms, as experienced by Simon when he similarly neglected to use PCT (above). Mark states this case made clear to him that “*the health impacts coming off anabolic steroids, without the post-cycle treatment... [are] massively linked with depression and anxiety*” (‘Mark’, interview), and this in part is why, despite being generally anti-steroid, Mark believes trainers should know all the relevant information regarding these compounds, in case their clients wish to commence use. This case demonstrates how, even when their own health is at risk, PTs do not necessarily conduct extra research into the compounds they are taking, and it is probable in this case that, prior to coming off, the trainer was making recommendations to clients based on what he himself was using, and the gains he was making, unaware he was supplying potentially harmful information.

Josh made the decision to go back on PIEDs some 10 years after his ‘abuse’ as a teenager (above), when he undertook a “*twelve-week challenge*”, with a view to competing in a ‘fitness modelling’ competition (‘Josh’, interview). Josh noted how, during the course of his 12 weeks of preparation, he was informed by his PT “*Oh there’s enhancers you can take’... which is clenbuterol and anavar. Now anavar’s meant to keep your size, and... clenbuterol is meant obviously to shred you up, to make you more lean... and he said to me that obviously ‘these would give you a better result’*” (‘Josh’, interview). In spite of having previous negative experiences using PIEDs, Josh followed his trainer’s advice, justifying doing so as follows: “*he told me what goes with what, and obviously how it works... there’s always someone that you can learn from... he was more knowledgeable than me on [that] aspect... steered me in that direction, if you know what I mean? He made sure that I had... the right stuff*” (‘Josh’, interview).

As described above, Josh initially took his negative teenage experiences with PIEDs as an indication he needed to research them more, and during the period he was not using conducted a great deal of research both online, and through asking competitive bodybuilders in the gym their opinions. When confronted with an authority figure in the form of a PT, however, Josh followed this individual’s instructions without believing it necessary to validate what he was being told via such external sources:

JP: *I said 'but is it anabolics – is it anabolic steroids?' and he said 'no, it's not... anabolic steroids is obviously testosterone based: trenbolone, you can get all sorts'...*

LT: *Well, anavar technically is an anabolic...*

JP: *Yeah, which I know now... At the time I was like 'oh, okay', right? 'Okay, that's fine'... doing research now... yeah, anavar is... a milder steroid.*

This exchange highlights both the implicit trust Josh had in his trainer, to give him all the information he would require, and the ways in which PTs can mislead clients, in this instance most likely (charitably) owing to the trainer being poorly-informed on the subject himself. Although Josh did not report any negative effects from the ‘cycle’ he was recommended (‘Josh’, interview), it is important to note that this misinformation could have been harmful, since ‘anavar’ does in fact interfere with the body’s natural hormone levels (George 2005), and this effect needs to be accounted for by anyone who wishes to use the drug (next chapter).

Josh’s trainer additionally recommended he take a dose of the “*fat burner*” clenbuterol that sounded excessive to my ear. When I prompted Josh by saying the dose sounded “*very high*”, he acknowledged “*It is a very high dosage, I mean he did say to me that obviously a lot of people can’t handle that, and they have shakes, stuff like that*” (‘Josh’, interview). Given the Bodybuilders in Monaghan (2001) were cited as taking between four and seven 20mcg tablets per day (p.130), with one individual noting that he felt such a dose was “scary, very scary”, owing to the side-effects it entailed (p.132), and given also that these individuals, as competitive bodybuilders, held significantly more mass than Josh, who when ‘ripped up’ for his ‘fitness modelling’ show was just under 80kg, it seems the “*six tablets a day [120mcg]*” Josh’s trainer recommended he take (‘Josh’, interview) was likely a far higher dosage than was safe for his client to be using.

Whilst Josh notes his trainer warned him that some individuals “*can’t handle*” this dose, one wonders whether an individual asking a trainer for advice might push beyond what they felt comfortable using, simply because they were told to take a certain amount, and trusted the trainer’s advice above their own perception of the effects (as noted by Monaghan 2001:133). Additionally, given the majority of these clients were presumably young men, one wonders whether a form of ‘*macho culture*’ might drive them to keep using the recommended dose in spite of negative side-effects, to prove they could ‘handle’ it, and were thus ‘more masculine’ (see Miller 2008; Courtenay 2000). This is naturally speculation, but is certainly worth considering, given Josh admitted to taking this dose, regardless of the warning supplied (though proceeded in an intelligent manner, as shall be discussed below).

Whilst Josh was the only respondent to have directly acquired a PIED routine through a PT, it became clear during data collection that others were aware this was a common means of learning to use amongst image-focussed subcultures. Pete at one point noted how trainers would not only offer advice on PIED use to clients, but would also work recommendations into discussions with regular gym users, as a means of acquiring new customers, in cases where they were also suppliers. This again demonstrates the interwoven relationship of drug supplier and information source, and the following hypothetical scenario, posited by Pete based on his observations in-gym, portrays this connection: “*I reckon yeah, if you was to be like... ‘I think I’ve reached my peak, like I think I’ve... hit the wall. I need something that’s gonna push me over the edge’, then [the PT] might go ‘well, yeah – you could take this and this... you could try this’ or ‘have you*

heard of this?"" ('Pete', interview).

In this scenario, Pete illuminates how recommendations on which products to use can precede any other discussion in such relationships, and therefore the knowledge imparted by the trainer, on which products give which results, will be the primary form of learning from the client's perspective. This indicates that Josh's experiences, where his PT recommended he take specific products to help him lean up for his "twelve-week challenge" without prompting from Josh, were not unique to him, and might in fact reflect the experiences of many young men training in these gym environments. It also shows how, in cases where a trainer is also a supplier, such opportunities do not simply end with clients, but extend to others within the gym, providing the individual in question has managed to get their "*foot in the door*" with the trainer, creating a degree of trust ('Pete', interview). Indeed, Pete notes how even this is not necessarily required, since some trainers who supply PIEDs will go out of their way to make sales, by recommending 'stacks' to anyone they think might be interested: "[Of] course you're gonna get a new trainer in there who's been taking steroids for [only] months, and gone 'mate, get yourself on this', like trying to earn... a few quid on the side" ('Pete', interview).

In addition to trainers in commercial gyms, it is worth noting that gym owners in what are considered 'hardcore' gyms were additionally seen as sources for both information, and frequently supply, as has previously been addressed in the literature (Monaghan 2001; Coomber *et al.* 2015*i*). Whilst such authorities are simply part of the ordinary subcultural environment for many competitive users (Monaghan 2001), it appears some image-oriented and hedonic users will purposely seek out these 'hardcore' gym spaces, in order to gain access to the knowledge and connections of such gym owners, again evidencing the 'bridging' forms of knowledge that influence this otherwise distinct population (Putnam 2001; Moroşanu 2016).

Physiotherapist Robert noted how, following a crackdown on PTs supplying or recommending PIEDs at the commercial gym in which he works, he noticed a lot of hedonic-type users had begun visiting a more 'hardcore' bodybuilding gym in a nearby town: "*I've heard from talking to people that it is basically gear... Nirvana. Cos obviously [the owner]'s a geared bloke. And a lot of people who train... here, are basically, you know, [going there for PIEDs]*" ('Robert', interview). Although this migration of image-focussed users to more 'hardcore' spaces is likely due more to the increased availability of PIEDs themselves in such spaces than information regarding them, Robert's comments nonetheless make clear that the gym owner, being such a visibly experienced user, is a draw for many of these 'bridging', or transient individuals, and clearly the owner's physique encourages potential users to turn to him for information when looking to get on PIEDs, in a similar manner to the way in which many approach PTs as authority figures. This serves to strengthen the theory of 'cultural transmission' via 'bridging' forms of knowledge, as opposed to learning solely through more established members of one's own subculture, or environmental space, indicating a more complex process of learning for some image-focussed individuals. As the previous section illustrates, however, those 'hedonic' users who turned to such 'competitive' trainers for advice did not always follow the PIED-routines of these bodybuilders, suggesting they followed advice regarding what would help them

to look better, whilst potentially ignoring advice on what to avoid in order to stay healthy.

The final and thought-provoking means by which some users sought to learn from authority was discussed in chapter two, in the way in which I personally was asked for my opinions regarding PIED use by some individuals, owing to my being involved in research in this area, albeit from a sociological, as opposed to pharmacological, perspective. When early in the course of the study, Mark approached me saying he was considering going on clenbuterol, to help him remain competitive relative to the trainers in his gym who used steroids, he asked if I could give him "*any reason why [he] shouldn't*" use the drug (field diary 02.12.2014). I informed Mark that I did not know a great deal about the drug's actual pharmacology, but was aware of some of the harms, and he asked if I could send him any links to reliable websites discussing these. I obliged, and he decided ultimately that, with a child on the way, it was not worth the risk commencing use (field diary 03.12.2014). As noted in chapter two, this experience impacted how I viewed my own positionality in the research, since I had crossed the emotional boundary of actually providing advice and guidance to a respondent (Blackman 2016), and it is clear that looking reflexively at my presence as a potential 'authority' in the field provides valuable data on the approach taken by those who looked to me for advice, such as Mark.

In another incident, Johnny was speaking to a friend in the gym about his desire to go on PIEDs, and at several points in the conversation looked to me, to explain for him different queries his friend had regarding use. I was asked to explain both the process of hypogonadism as relates to 'cycling' steroids, and similarly asked to support Johnny's assertion that steroids do not "*shrink your dick*", a misapprehension his friend had apparently acquired from somewhere (field diary 08.06.2015)³⁴. Unlike my conversation with Mark, I was aware in my conversation with Johnny and his friend that, in disproving myths relating to the harms of steroid use, I might actually have influenced them towards commencing use, and so commented upon the "*blurring of lines*" between my roles as researcher, and friend to Johnny, in my field diary that night (08.06.2015). As noted in chapter two, I ultimately reasoned that since relaying accurate information is an essential element to harm-minimisation, I was not violating the ethics of friendship that Taylor (2011) notes must be negotiated in research involving intimacy. Nonetheless, the experience of being deferred to as an authority figure highlighted for me the diverse ways in which more cautious individuals will approach the process of learning to use, even if in both these cases the individuals simply wanted me to confirm what they had already learned elsewhere (neither ultimately went on to take PIEDs following these discussions).

Indeed, these two instances of individuals approaching someone they knew to be researching the subject of PIEDs for advice are particularly noteworthy, as they both relate to image-focussed individuals who were considering using, but ultimately chose not to. This might suggest that some image-oriented trainers are indeed as cautious as their sport-oriented counterparts, but that those who approach use in such a cautious manner tend not to go on PIEDs once they become aware of the harms, since they do not have such a

vested interest in using as powerlifters, and other competitive users, naturally would. This suggests the possibility that variances observed between patterns of use in sport-oriented, and image-oriented populations might not be so easily attributed to subcultural differences as so far suggested, but might more easily be attributed to the types of user who tend to commence use within either group of trainers. This brings to mind Hirschi's (1969) suggestion that observed patterns in group behaviour might largely be caused by the tendency for individuals to seek out those with similar dispositions, and in order to explore the extent to which this might hold true for PIED users, this piece shall therefore turn to a case study of an individual who appeared to cross the boundary between the identified groups.

Non-Hedonic Image-Oriented Use and Cross-Category Similarities: A Case Study

The experiences of Eddie Michaels offer an interesting case study for a certain type of image-oriented use, based around socially-acquired knowledge, which is worth exploring at this stage. A former marine, Eddie's motivation in using was overwhelmingly image-oriented, summarised by him as follows: "*who wouldn't want to be 210lbs with stacks of abs!*" ('Eddie', personal correspondence 20.04.2016). Although his motives for use could not be said to be 'hedonic' ("*back as a kid I was bullied a lot for being skinny, it's kind of spiralled on from there.*" ('Eddie', interview)), it is nonetheless worth noting that Eddie's learning process more closely mirrored that of sport-oriented users than his image-focussed peers. This suggests there could perhaps be more of an influence of personal background on patterns of use, and knowledge, than so far inferred from the comparisons between user categories, which indeed could prove more significant than many of the cultural factors discussed above.

Although Eddie did not conduct independent research online, this was due not to disinterest in educating himself regarding the compounds he took, but rather because he did not trust the open forums of the web to give him accurate information: "*You can find... any story you want, on the internet. If you want there to be an answer, you will find that answer... sometimes people do go on the internet, and they find three of one [opinion], two of the other, 'oh, there's the majority, I'll go with that*" ('Eddie', interview). Eddie curiously is here simultaneously critical of other users, who are unable to distinguish between worthwhile and harmful information, whilst seemingly classifying himself as part of this group, acknowledging that he might be prone to finding the answer he 'wants', and therefore does not trust himself to objectively determine if information is good, or not. Indeed, Eddie's criticism here is reserved solely for those individuals who do not have sufficient knowledge to determine which opinion is the most objectively correct, yet who act on the information they read regardless. In many ways, this demonstrates that Eddie was one of the more cautious users interviewed, and he further elaborates on this lack of confidence in his ability to discern what information on the web is worthwhile by noting how, in his opinion, he "*would never... have said 'yes' to*

[going on PIEDs] if I had just the internet [for information]" ('Eddie', interview).

This is the first instance of a user not relying on the internet owing to doubts in his own ability to analyse information, making Eddie something of a unique respondent. The sport-oriented users who were dubious of the veracity of claims on forums either supplemented that knowledge with further research, or else combined it with locally-sourced advice. Eddie, by contrast, wholly disregards anything posted online, and made this explicitly clear in interview: "*Now, who I get my information off, who sells [PIEDs] to me, I fully trust what he says. I will go by what he says... and that's it. If something on the internet's said something different, I'll ignore it*" ('Eddie', interview).

Eddie's comment here might suggest his method of acquiring knowledge is similar to that employed by Josh, and other image-focussed users who simply trusted their peers' advice above all contrary information. However, based on the remainder of his interview, Eddie is clearly not so naïve, or reckless in his use, as these individuals. In commenting on his willingness to take his friend's (and supplier's) advice regarding use, Eddie explains: "*he's used it himself. And the friend, he's a medical professional, so he knows what he's doing... he knows what's in it, he knows how to do it safely*" ('Eddie', interview).

Eddie's situation is therefore more reminiscent of Rich's relationship with Jim, discussed in the first half of the chapter, than to Josh's relationship with his trainer. Jim was both friend and supplier to Rich, but also had a "*chemistry background*" ('Jim', interview), indicating he had more knowledge of the mechanisms of action of PIEDs than could be expected from users without such academic experience. Owing to this combination of factors, Rich at many points indicated he believed he could trust Jim's knowledge above other sources, frequently using such prefixes as "*Jim said*", "*I was speaking to Jim about*", and "*Jim's told me*" ('Rich', interview). Likewise, in Eddie's deference to his friend's knowledge as a medical professional, there again appears to be a form of discrimination amongst local sources of knowledge: both Rich and Eddie are critical of other local users, including PTs and other 'authority figures', yet both see their friend (and supplier) as being far more credible, owing to their respected professional backgrounds, in addition to their proven past use: "*he's a clinical physiotherapist... does a lot of A&E work... so when it comes to information, I felt that he... knows what he's on about*" ('Eddie', interview). As noted above, Rich only undertook independent online research after experiencing negative effects following a cycle, and so given Eddie had not suffered the same negative experiences, his approach to learning could be said to directly mirror that of Rich, a powerlifter and sport-oriented user, at this earlier stage in use.

As with Mariusz, with regards to his protocols when beginning use (above), Eddie similarly was cautious in his experimentation with compounds, stating his philosophy of use as follows: "*For all the possible side-effects you could conceivably get, you stop taking it*" ('Eddie', interview). Contrast this with Pete's friends, who continued to use even after suffering heart attacks, or cancer diagnoses ('Pete', interview; next chapter), and it is clear Eddie is nowhere near so reckless in his use as the more hedonic-type "*lads*" who make up a notable portion of the growing image-oriented user population. Indeed, similar to the

powerlifters, Eddie was critical of local (image-focussed) users who did not follow such careful procedures, stating: *"If you're having problems, stop. The majority of the time just stopping would solve it"* ('Eddie', interview).

Another element of the cautious approach adopted by the more discriminating sport-focussed users, such as Martin and Mariusz, was the practice of precisely measuring and recording every step of their PIED routine: *"I note down every... single dose... I've got literally a journal"* ('Mariusz', interview). This level of preparedness was not reported to occur within 'hedonic' user subcultures by any respondents familiar with such cultures, whilst Eddie mirrored such practices, noting: *"I had it timed out: I was taking the injections to the hour, every week"* ('Eddie', interview). As with Mariusz's knowing *"how many mil I'm gonna use a week, so I buy the exact amount for the duration of the cycle"* ('Mariusz', interview), Eddie likewise had a set routine planned from the beginning of his cycle, from which he did not deviate, as some of the less-discriminating image-oriented users are recorded as having done (see Pete's comments regarding 'Mike', above): *"I was having... one mil of each [compound], twice a week... hardly anything. I know quite a few people using the same stuff and they're having two or three mil – of each – per injection. Two or three times a week. Fair enough if you've been on it a while, but no thanks, not for me"* ('Eddie', interview).

In addition to highlighting how Eddie stuck to a set plan of use, not revising or increasing his dosages or duration at any point in the cycle, as Pete's peers, and Simon's friend did (above), this quote also highlights Eddie's more-cautious approach to use with regards to dosages, as well as his critical view of those who do 'harder' cycles without first acquiring the requisite experience using lighter doses, similar to powerlifter Martin's criticisms, quoted above. Although Eddie's 'cycle' was somewhat higher in dosage than the sport-oriented users' initial cycles (see next chapter), Eddie nonetheless notes how others around him tended to use a lot more, and so his choice of dosage within this subcultural environment is still somewhat conservative, aligning him more with sport-oriented users in this regard.

Indeed, Eddie's 'post-cycle therapy', which he planned and arranged before ever commencing PIED use, suggests a level of caution, and preparedness, not seen amongst other respondents within the image-focussed user class. Although Eddie did not utilise a multiple-compound regimen, as did those sport-oriented users who discussed their PCT (Martin, Mariusz and Rich), other image-focussed individuals frequently did no PCT at all, as discussed above. Additionally, although he did not take 'HCG', as some sport-oriented users (Mariusz, Rich) advocated was necessary, Eddie noted that, in terms of negative effects related to ceasing use, such as fatigue, or depression, he *"had literally nothing at all"* ('Eddie', interview), suggesting that his course of *"Nolvadex [tamoxifen] just as a PCT"* ('Eddie', interview) was sufficient. This is reminiscent of the evidence-based testing advocated by the sport-oriented users, once again paralleling Rich's methodology, where he based future PCT regimens on his prior experience ceasing use.

It worth considering here whether Eddie's successful experience of using what could be classed as 'half-PCT', based on the comments of sport-oriented users, implies the ethnopharmacological knowledge of

those found within 'hardcore' gyms was overly cautious, and that on low-dose cycles HCG is not in fact necessary. Given the nature of ethnopharmacologies, it is plausible that, in the same way as many hedonic and image-oriented users participate in a subculture wherein PCT is not seen as necessary, many sport-oriented environments might similarly have a culture with the opposite values, over-emphasizing the necessity of a two-compound PCT, even when using relatively 'soft' PIEDs, a redundancy from which deviation does not occur, and thus highlight its excessiveness, owing to the Foucaultian (1975) pattern of discipline enforcing norms within such groups (above). In this sense, Eddie's experiences could possibly indicate the division between user subcultures with regards to knowledge of use is not a matter of objective information versus hearsay and "*broscience*" ('Mariusz', interview), as might otherwise be suggested by the discussion in this chapter, but that *both* user categories are subjectively filtering information through certain biases, perhaps divided based on predispositions toward risk-taking, versus risk-aversion, relative to the broader cultural consensus³⁵.

Eddie was happy to acknowledge that "*I may react differently [to certain drugs], others may react differently. That's how it is*" ('Eddie', interview), suggesting he was not critical either of those who utilised a higher or lower level of post-cycle therapy. What is particularly crucial to note, however, was Eddie's personal attitude towards his PCT, as evidenced in the following quotation: "[A friend was] saying '*your [PIED] doses aren't big enough to warrant [doing PCT]', but if needed, I would rather I took it just in case... I'd rather balance it out properly*" ('Eddie', interview). This quotation perhaps best illustrates Eddie's position as an individual within an image-focussed subcultural environment, but who approaches use in the manner of a sport-oriented user. Eddie trains in an environment where people do not believe post-cycle therapy is necessary for all PIED cycles, and are vocal about this. In Simon's case (above), such thinking was illustrated as being both harmful, and dogmatic, to the extent that even following a negative experience, Simon still refused to learn from his mistakes. Contrast this with Eddie's insistence on taking PCT even when told he would not require it, and it is clear that, although both men are training primarily for image, within image-oriented environments, they are entirely different in their approach to use.

Eddie's case clearly demonstrates a certain degree of intra-subcultural difference, based on personal characteristics. Although surrounded by people who used several times as much on-cycle as himself, or who suggested he need not bother with post-cycle therapy, Eddie ignored their advice, stating that he believed "*talking to the right people*" was essential in "*learning how to do [PIEDs] properly*" ('Eddie', interview), strongly reminiscent of powerlifter Martin's approach to learning, documented above. Although this might be considered to evidence the fact that categories of user are in fact more porous than previously suggested, the fact that Eddie notes so many of the common features identified as existing in image-oriented subcultures as being present in his own peer environment suggests that these broad categorisations are for the most part accurate, with individuals such as himself rare exceptions.

In Eddie's opinion, the difference between himself, and the users he saw and spoke to in the gym, was his focus: "*I'm training cos I've got a goal, and I want to hit that goal... a lot of people are just training cos they*

want to keep fit, or it's a social thing for them. And I don't fault them for anything, but they probably don't have the information, they probably don't know the background" ('Eddie', interview). As with Josh, and Pete's peer group, there are indeed many users who train for 'social' purposes, and based on the evidence of the present research, Eddie's analysis of their information levels indeed seems to be correct. This could suggest that, in reality, the split between user types could more accurately be termed as "*determined*" versus "*social*", with Eddie's approach placing him in the former category, alongside competitive sport-oriented users, such as Mariusz and Martin, whose learning processes he more closely mirrored. Indeed, this would account for the difference between 'serious', competitive bodybuilders who use intelligently, such as Big Steve, and those 'body-builders' who "*never... go anywhere*" identified by Mariusz (interview), and Robert (interview), who are technically training for sport, but nonetheless use in a harmful manner, more consistent with that observed amongst hedonic-type users.

Curiously, another image-focussed respondent who had decided to not use PIEDs, Dan, would likely also fall into this same "*determined*" class were he to commence use, with his cautious attitude to doing so being all that had kept him from proceeding to use thus far ('Dan', interview). This seems to evidence the proposition that personal dispositions could play a greater role in patterns of use, and learning to use, than the cultural "sport" versus "image" division adopted up to this point would suggest. However, given the already expressed concept of a form of "*bridging*" learning (Putnam 2001) between ethnopharmacologies, it is perhaps equally plausible that in Eddie and Dan's cases, the influence of peers from more-informed subcultures simply overrode the prevailing trends of their social groups, since Eddie relied on social learning from a medical professional, and Dan from a competitive powerlifter. Eddie's military background likely also predisposed him to seek out more rigid, planned methodologies than those commonly seen within his own image-focussed subcultural environment, and this again reflects a cultural influence, albeit based upon past experience (see *Harry's* experiences, below).

Such exceptions to the identified pattern do not render the general inferences proffered for the defined user categories incorrect, but merely demonstrate that learning is not *wholly* subcultural, and differences can arise both within, as well as between classes. Therefore, whilst a more accurate interpretation of patterns of use might indeed distinguish between "*determined*" and "*social*" users, this would amount to a Procrustean definition of user categories, a means of separating users based upon their very manner of use, and thus unhelpful from a policy perspective, where trends in groups recognisable without prior in-depth knowledge of their constituent members' attitudes are of more use, and greater significance. The fact that image-focussed, particularly hedonic users, overwhelmingly tend to use in a "*social*" manner, whereas sport-oriented users are overwhelmingly "*determined*", is therefore a pattern that remains extremely informative, regardless of those individuals who might defy it, owing to personal disposition.

It therefore seems likely that a mixture of both personal disposition (Hirschi 1969) and 'peer preference' (Coggans and McKeller 1994), as well as (sub)cultural influences (Shaw and McKay 1942; Burgess and Akers 1966; Foucault 1975), contribute to the patterns common to these user categories. Although having distinct

ethnopharmacologies, the existence of 'bridging' connections (Putnam 2001) between groups, in conjunction with the democratizing effect of the internet (Power 2014; Van Hout and Bingham 2013), and the personal dispositions of individuals (Hirschi 1969), contribute to an environment wherein a set norm of use develops, the rigidity of which is determined by the cohesiveness of the subculture in question (Burgess 1925; Foucault 1975; Durkheim 1893;1897), but is not always rigidly adhered to. This concludes the inferences that can be drawn from the 'social learning' element of the 'learning to use' Process. Prior to conclusion, however, this chapter shall lastly explore the ways in which image-oriented users experimented in their process of learning to use, providing one final area in which they can be compared, and contrasted, with those users identified as principally sport-oriented.

Experimentation

As shown in Eddie's case, some image-oriented users, for reasons likely attributable to personal disposition, approached the taking of PIEDs in a manner similar to that observed amongst sport-oriented users. This overlap between categories was nowhere more evident than in the approach users took to 'experimentation' with compounds.

It was suggested above that Eddie's background in the marines might have contributed to his more rigid approach to use, and based on the responses of a fellow former marine, Harry, this attribution seems reasonable³⁶. Eddie was quoted above as having stated that a core approach he took to use was the principle of "*if you're having problems, stop*" ('Eddie', interview). In keeping with this cautious form of experimentation, Harry noted how he applied this principle in his own approach to use: "*I tried growth hormone for about two weeks, but the thing is, you have to inject it into your stomach area, and I just ended up with a bunch of red lumps over my abs – didn't look very good. So I stopped taking it*" ('Harry', field interview).

This scenario not only parallels the level of care in experimentation taken by many sport-oriented users, but in fact directly mirrors an incident that occurred when Rose began using a new batch of HGH, and realised it was not the same quality her previous supply had been. As she described it: "*my skin was coming up in like red bumps around the injection site, and if that happens you should really stop doing it straight away, so I just ditched the entire batch, just threw it in the bin. Not taking the risk of that*" ('Rose', interview). Although Rose based her decision to stop using the HGH on medical information she read regarding side-effects, whereas Harry's decision appeared to be based on his subjective dislike of the effects, this nonetheless shows that parties from both user categories followed something of a precautionary principle in their use of compounds, minimizing harm by stopping use when they observed

negative effects.

Gym-user Johnny similarly decided to cease use of a compound after experiencing negative side-effects, although in this case the substance in question was a legal, over-the-counter 'prohormone' ('superdrol'). Having taken this powerful supplement believing it to be relatively harmless ("*I thought it was you either take steroids or you don't. I didn't realise there was...different levels*" ('Johnny', interview)), Johnny described some of the side-effects he experienced, and how he reacted: "[I got] really bad spots... When I got itchy nipples I kind of realised 'something's not normal here', so I bailed ship from the[superdrol], and started taking [a PCT drug]" ('Johnny', interview).

Johnny's experience is particularly intriguing, since he did not knowingly take a steroid-type compound, and thus had not conducted any research prior to commencing use. Johnny's whole learning process came from asking the supplement store owner what he would recommend, and Johnny recalled the simple exchange the pair had regarding the use of a post-cycle therapy drug, in conjunction with the superdrol: "*he said 'take these...' - I think I had to take one [a day] or something during [the superdrol cycle]... then [post-cycle] he said 'take this many, for this long'*" ('Johnny', interview). The fact that Johnny "*bailed ship*" from using the superdrol after only two weeks, having experienced negative effects, and subsequently took the PCT drugs as instructed by the seller, demonstrates the level of care taken by him in his unwitting experimentation, and again highlights the transfer of pharmacological knowledge between supplier and user, as observed in other instances. This demonstrates the wide application of this principle of cautious use observed across user groups, as even an individual who had not undertaken any independent research prior to commencing use (being unaware he even was a 'user') still applied the principle, ceasing use when he realised the drug was having unpleasant effects.

Of course, certain PIEDs are synonymous with negative side-effects, as several sport-oriented users noted regarding the compound trenbolone, a favourite amongst powerlifters looking to do an 'advanced' cycle (Mariusz; Jim; Rich). This could suggest that, although image-oriented trainers did in fact frequently approach their use of PIEDs in a suitably cautious manner, those who followed a strict rule of "*if you're having problems, stop*" ('Eddie', interview) might be said to be using incorrectly with regards to certain types of drugs, where simply commencing use without expecting side-effects would be considered foolish, and perhaps harmful, by some of the more experienced sport-oriented users. Indeed, in the sport-oriented users' 'experimentation' section above, it was noted that Mariusz ceased using 'DBol' owing to his disliking its effects, yet continued to use trenbolone in spite of that drug's side-effects, because in the latter case these were expected, whereas in the former represented an 'abnormal' reaction ('Mariusz', interview). This more nuanced approach taken by Mariusz demonstrates how, even in comparison to the most conscientious of image-focussed users, the powerlifters still had more information, and a more sophisticated approach to use, indicating a notable knowledge divide (as shall be expanded upon next chapter).

Despite not being as informed as their sport-oriented counterparts, however, it is clear that some image-oriented individuals nonetheless took an intelligent approach to commencing use of PIEDs, and learnt from their own reactions to the drugs whether they were suitable for continued use, or not. Interestingly, the three individuals cited so far in this section all train in a 'compound lift'-oriented manner (see Rippetoe and Kilgore 2007), in other words utilizing primarily strength-training routines, in order to enhance appearance. This might indicate some interaction with more serious lifters, thus leading to cross-cultural 'bridging' knowledge with regards to use (as already discussed in Eddie's case). This perhaps indicates a familiarity with training for purpose not likely to be seen amongst other image-focussed trainers, and indeed, those who were not involved in such 'dedicated' training (as opposed to 'social' ('Eddie', interview)) were generally observed to use in a less-organised, less-cautious manner.

Josh spent three years training at a mixed martial arts academy between his initial use as a teenager, and his later use for a 'fitness modelling' show ('Josh', interview). As noted above, there were distinct differences in his approach observed for these two periods, and during the earlier period of use, Josh had no sporting experience, and used simply for image. During the course of our interview, when Josh stated he had started with a dianabol-only 'cycle', before later moving on to testosterone, I wondered whether this had been an intentional progression on his part, similar to the process described by powerlifter Martin, who took 'DBol' "*on its own, just to see how my body reacts...*" ('Martin', interview). Querying Josh, I received a disconfirmation of this suggestion, along with an explanation for the actual reasoning behind his process of use:

LT: *So you went on dianabol for a period before going on testosterone, was that kind of to get used to the effects in your body...?*

JP: *Not really, I mean you could say that was the theory: if I'd used my brain logically you could probably think 'oh I'm testing my body and getting it used to... obviously going onto the harder steroid, which is the injection', but with me that's not how I thought... I was actually scared to do the injection first... If I was a little bit more... injection-friendly, then I would've probably done the two together straight away... there was no method to taking the dianabol first, no.*

('Josh Perry', interview 30.04.2015)

Josh admitted he did not consider experimenting to see how his body would react to the compounds, merely using whatever dose his friends advised, trusting them to know better than him ('Josh', interview). What is interesting, however, is the way Josh learnt from his negative experiences as a young man, and when commencing PIED use again some years later, took a different, more intelligent approach to experimenting with compounds.

Above, it was noted how Josh's trainer recommended he take a dose of clenbuterol which appeared, through comparison to the available literature, to be very large, a fact I commented on in our interview. In acknowledging the dose was "*very high*", Josh offered an important insight into how his approach to

experimenting with compounds had evolved over the years: “*I did like two [pills a day], then I upped it to three, then four... So I tapered it on, over about two weeks*” (‘Josh’, interview). In effect, whilst Josh’s trainer was recommending he start using an amount that could potentially have harmful side-effects, Josh took it upon himself to learn what effects the drug would have in lower doses, prior to increasing it to the recommended level, and presumably would have resisted increasing the dose had he experienced too many negative side-effects on a lower amount. It is clear that, having made the mistake of simply following his friends’ advice the first time he used, Josh had by his second period of use learnt to experiment with the substances he took, and thus used in a manner more in line with sport-oriented users. Of course, Josh noted he had spent time researching PIEDs between these periods of use, and as quoted earlier, spoke to competitive bodybuilders in the gym, in addition to visiting forums. This again supports the notion that ‘bridging’ connections can be formed between distinct classes of user, and ethnopharmacologies developed through this knowledge exchange, in Josh’s case leading to a more sophisticated approach to experimentation, in addition to any specific knowledge relating to compounds.

There were, however, a number of image-focussed users who did not approach PIED use in a cautious, or methodical manner. Simon started off using testosterone and deca-durabolin at the same time, without getting used to the testosterone on its own, and additionally did not ‘taper on’ (‘Simon’, interview). Although using a self-proclaimed “*low dose*” of both compounds (which nevertheless was still in excess of many sport-oriented users’ normal doses (such as Mariusz and Martin)), when questioned whether this was for the purposes of mitigating side-effects, Simon flatly denied the suggestion: “*that’s not actually why I do a lower dosage, I do it so it lasts a bit longer*” (‘Simon’, interview)³⁷.

Indeed, Simon’s decision to not use PCT following his second cycle, despite experiencing negative effects following the first, demonstrates his refusal to learn from his mistakes. When asked about negative side-effects experienced during his first steroid cycle, Simon suggested: “[it was] possibly a dodgy batch” (‘Simon’, interview). Although there is indeed such a thing as a ‘dodgy batch’ of steroids (next chapter), the fact that this was Simon’s immediate assumption, without exploring other possibilities, is revealing. Whilst Rich took his negative experiences as a sign he needed to conduct more research, and alter his approach (‘Rich’, interview), Simon assumed the drugs must have been ‘dodgy’, and that he could do the exact same thing next time and not experience the same negative effects. As Robert stated, some users just “*can’t learn from cause and effect*” (‘Robert’, interview).

Lastly, in relation to more hedonic-type users, it is clear that no experimentation was taken with the intent of eliminating compounds that gave the user negative side-effects. As already noted, several of Pete’s friends experienced severe negative side-effects, and several had health conditions that could possibly be related to their PIED use, with one having suffered a heart attack, and another who used the tanning drug ‘melanotan’ (see Evans-Brown *et al.* 2012) developing a melanoma (‘Pete’, interview). These factors in no

way discouraged them from using, and indeed, the melanoma incident perfectly captures the mindset of those hedonic users within Pete's peer group: "*this is the sort of mindset of these lads: he's said 'right, well I'd better inject as much melanotan as I can before I go to the doctor's. I'm going to the sunbeds tomorrow.'*, like, '*If I'm going to the hospital tomorrow, I want to look tanned*'" ('Pete', interview). Again, this echoes Robert's words of the inability of certain users to associate cause and effect, and illustrates just how little those hedonic users involved in "lad culture" really care about negative effects, or adapting their usage based on experience. As Pete's friend 'Jean' perfectly summarised this rising culture's outlook: "*gonna die sooner or later*" ('Pete', interview). *Après nous la déluge.*

Indeed, I heard of similar instances of individuals oblivious to the health impacts of their use during the course of data collection, including direct instances of harm, such as a user who had been warned by his doctor that his steroid use was likely responsible for his severe health problems (field diary 27.03.2015; see Monaghan 1999), and instances of individuals being dismissive of friends' cautions they were harming themselves (field diary 11.08.2015)³⁸. Combined with Robert's observations regarding what he sees and hears in the gym (above), it is clear that in this regard, hedonic-type users show little inclination to adapt their use based on experience. Whilst some did minimise their use, this only appeared to occur in instances wherein they were influenced by external forces, such as Pete's friend 'Jamie', who "*takes everything he can get his hands on... but obviously playing rugby, he can't start taking too much*" ('Pete', interview). Again, this demonstrates how even those users who are limited by constraints such as sporting obligations still did not approach use in a methodical, or cautious manner, instead taking "*everything*", but simply using lower doses (see also the earlier comments relating to Pete's friend who is ex-forces).

Of course, occasionally a sport-focussed user would be identified as similarly using in spite of negative effects, and this could not be attributed in these instances to a lack of knowledge, as one might assume in the case of many 'hedonic' users. This was true of the locally-infamous competitive 'strongman', and doorman Stavros, who was rumoured to have been banned from a gym owing to the owner's fear he would have a heart attack and die on the premises, a fear based on how red, short of breath, and ill his excessive PIED use made him appear (field diary 01.03.2015). This shows the difficulty in distinguishing between poor practices in the process of learning to use, and excesses that are the consequence of the 'zero sum' nature of use: those who use more make better gains, even if this comes at severe costs, whilst delivering diminishing returns (next chapter). Whilst Pete frequently criticised his friends' casual approach to use ('Pete', interview), the fact he was there to tell them they were being foolish suggests the latter explanation may be a more accurate representation of reality: hedonic users may be careless in their use simply because their higher time-preference (above) makes them more prone to risk-taking, and not necessarily because they do not have the same access to knowledge as the more cautious, sport-oriented users.

Despite Stavros's behaviour, however, it should be noted that in the course of this research, only one sport-focussed individual was identified as being as unconcerned for his health, or as unwilling to adapt his

usage based on negative effects, as appears to be the norm for hedonic users, and thus a division clearly remains between these two categories in their use of these drugs. This finding is exaggerated by the fact that, as a former competitive powerlifter, I had more access to sport-oriented users than hedonic users, and yet still observed more instances of the latter 'abusing' PIEDs in this manner than the former. Whatever can be said regarding knowledge and motivations, therefore, it is undeniable that there indeed exists a distinct difference between these user groups, with regards to how they react to, and mitigate, harmful consequences of their use.

Chapter Conclusion

It is clear there are a variety of means by which individuals from all subcultural groups were able to learn about PIED use; from independent research conducted on the internet, to social learning, where the ethnopharmacological knowledge of one's subculture could be absorbed and applied, to learning from authority figures such as gym owners and personal trainers, and indeed learning through the process of doing, as identified in the 'experimentation' sections. Common themes emerged, and it is clear that, in contrast to Monaghan's (2001) findings, the internet now plays a significant part in the learning process of many PIED users, thus confirming Evans-Brown *et al.*'s (2012) findings in the context of the local market.

Although this form of learning differed from that observed by Monaghan (2001), the in-gym, subcultural learning identified in his research nonetheless remained, and indeed played a significant role in the learning processes both of competitive, sport-oriented users, as well as image-focussed, and hedonic users. Indeed, it seems probable the subculture in which a given individual was immersed, and the social norms of that subculture, in fact influenced their independent, online research practices, with sport-oriented users being notably more critical in the course of independent research than image-oriented trainers, a trait likely inherited through their increased understanding of PIEDs, absorbed through social interaction, with their given subculture's ethnopharmacology.

Although reliance on Personal Trainers for information regarding PIED use appeared to be limited largely to image-focussed users, gym owners in 'hardcore' establishments were seen as reliable sources for information across user categories, again affirming Monaghan's (2001) findings in relation to bodybuilding gyms. Observers were often critical of PTs, suggesting they frequently did not have sufficient knowledge to advise clients safely regarding PIED use, with trainer Mark suggesting a need for PTs to ensure they are aware of the details of safe PIED use, to minimise harm for the clients ('Mark', interview). The fact that PTs were supplying information and products to those not a part of PIED-associated subcultures additionally further suggests the trend towards 'normalisation' of use (Parker *et al.* 1998) and supply (Coomber *et al.*

2015ii) in ‘commercial’ gym spaces.

The main conclusion of this chapter, however, is that whilst there is some overlap observed between user populations in their learning processes, the division between ‘image-focussed’ and ‘sport-focussed’ users is nonetheless apparent, and substantial. In spite of the ‘bridging’ forms of knowledge sharing (Putnam 2001) discussed in this chapter, it is clear that, for many reasons, both cultural (Shaw and McKay 1942), and personal (Hirschi 1969), image-focussed and sport-focussed users approached use in divergent manners, leading to the emergence of distinct ethnopharmacologies, and principles of use. Whilst competitive users rigidly followed a strict set of cultural norms, or ‘disciplines’ (Foucault 1975), image-oriented users, particularly those whose use was hedonic in nature, partook in a far broader range of practices, and beliefs, and indeed used in a more ‘deviant’ manner, with regards to the discarding of cultural norms (Burgess 1925; Sutherland 1947), thus indicating a significant gulf between the identified user types.

Whilst the nature of this research as a local ethnography means it is not appropriate to ‘generalise’ these findings to the broader population, in the context of the subcultural groups surveyed, the observed pattern was fairly stark. Although individuals such as Eddie and Stavros might appear to confound the user-category framework applied here to some extent, the broad trends identified strongly suggest the analyses regarding the differing subcultural approaches to learning is valid, with these ‘outliers’ simply indicating that personal disposition, as per Hirschi (1969), might play a more significant role in the actions of individuals than other theories of subcultural learning would suggest.

In sum, therefore, whilst competitive, sport-focussed users were meticulous in their research, image-oriented users, although drawing on a similarly diverse range of resources, did not have such depth to their process of learning, and were frequently victim to either misinformation (Simon), or a simple lack of interest in following the norms prescribed by their competitive counterparts (Pete’s friends). The next chapter shall further investigate harms associated with use, in conjunction with other elements of the ‘longer-term use’ of PIEDs, and this shall allow the conclusions of the present chapter to be further explored, and analysed, in the context of use more broadly defined than the initial process of learning.

6 Longer-Term Use; Practice, Myths and Realities of Use

Introduction

Any analysis of patterns of drug use, and normalisation of use, must include discussion of the actual manner in which the drugs are utilised by the groups considered. Previous research by Evans (1997), Monaghan (2001) and Bates & McVeigh (2016) has addressed ways in which PIEDs were used long-term across different populations and periods, and these findings, in conjunction with the framework offered by Parker *et al.* (1998), shall help in analysing usage patterns identified in the present study.

As noted last chapter, the majority of respondents conducted some degree of research prior to commencing use of PIEDs, in order to use in a safer, more informed manner. Consequently, many of those surveyed, especially sport-focussed users, employed measures to prevent harm, and minimise side-effects, whilst 'on-cycle'. Such harm-minimisation measures demonstrate the variety of ways in which users from each category would plan for, and adapt to, harms associated with PIED use, thus providing insight into potential ways in which public policy could assist in the reduction of harm for such groups, in addition to further informing analyses of the divergent ethnopharmacologies and practices observed across user categories in this research, which shall inform conclusions regarding the increasing 'normalisation' of these drugs within certain portions of the population.

This chapter shall give an overview of the broad range of methods employed by users in order to account for, and minimise anticipated harms, beginning with an extension of the previous chapter's discussion of the ways in which users attempted to minimise harm through the manner in which they selected which drugs to use, and the ways in which they utilised these drugs, in terms of intelligent dosing, 'tapering on', and related phenomena. The discussion shall then turn to the general health improvement regimens enacted by many respondents prior to commencing PIED use, including abstaining from alcohol, and the use of 'steroid accessory drugs', intended to minimise the incidence and harm of negative side-effects whilst 'on-cycle'. This shall lead into a discussion of the experiences of those users who sought medical advice from a doctor, or specialist in a needle and syringe clinic or similar, and shall examine why such practices were not more commonplace amongst users.

The chapter shall then move to a discussion of some of the negative outcomes experienced by respondents, emphasizing the importance of advance harm-minimisation practices (Public Health England 2015). This shall include both harms caused directly by the administering of products, as well as looking in-depth at the phenomenon of 'dirty batches', a concern for a number of users, given the tendency for

available drugs to be 'underground', unregulated product (Coomber *et al.* 2015; Llewellyn and Tober 2010). Finally, the chapter shall turn to incidences of users suffering from either significant, or potentially significant health events, and shall analyse the ways in which the differing user categories approached such incidents. The chapter shall then conclude with an evaluation of how findings relating to longer-term patterns of use fit the identified frameworks of divergent user ethnopharmacologies, and increasing normalisation of PIEDs.

Using Moderate Doses, Thinking Long-Term

The previous chapter featured discussion of measures employed by users to minimise harm when first learning to use PIEDs, including the use of low dosages to gain familiarity with drugs, and the planning of 'cycles' in detail, in order to ensure consistent levels of steroids in the bloodstream, with sufficient 'breaks' to allow full receptor recovery. This is worth expanding upon further, in order to highlight one of the more effective means by which users accounted for potential harms, both prior to commencing use, and whilst 'cycling'. This shall then lead in to a discussion of the avoidance of specific drugs, similarly based on an informed awareness of potential harms, acquired through the learning processes identified last chapter.

Powerlifter Martin, who as previously noted appeared to be one of the most knowledgeable respondents in this study, described his approach to long-term use of steroids in detail, and it is worth exploring his process, as this is likely the closest to an 'ideal' approach to long-term PIED use described by any respondent. The previous chapter described Martin's approach to his initial steroid cycle, beginning with "*anavar only*", in order to see how his body would react to this steroid alone, before moving on to 'harder' PIEDs. In addition to this cautious approach to initial use, Martin made clear that his longer-term approach was equally risk-aware, with the potential for negative outcomes considered closely: "*I try to take the minimum [amount to] just help... that little bit... but my body's able to keep up with the strength, so if I have to come off it, I'm not gonna spiral into a massive depression cos I've lost 40, 50 kilos off all my lifts, which is what's happening for a lot of guys... you know, they're coming off [cycle] and... their strength has gone. It's cos the steroids [are]... doing too much for them. So I try and keep it quite low*" ('Martin', interview).

This awareness that one should temper one's use, and not simply "*take a lot more of it*" ('Martin', interview) in the hopes of increasing performance at a faster rate, was a common feature amongst competitive users, with Martin detailing his reasons for following such an approach in the most depth. As Martin saw things, using low dosages of steroids for a limited period of weeks actually led to more consistent strength gains "*than doing one fucking great massive course, where I get massively strong and then I have to cycle off and I get massively weak, and have to do more*" ('Martin', interview). As noted last

chapter, Pete observed that one of his hedonically-motivated friends was guilty of following the exact practice criticised, describing how “*once he stops, all of his mass... will just fall off him... [so he'll] cycle twice as hard as what he did last time... taking twice as much as he should, just to get his size back*” (‘Pete’, interview), demonstrating the veracity of Martin’s claims regarding this aspect of use. As Martin noted, since he “*do[es]n’t need to get bigger and bigger and bigger*” (‘Martin’, interview) as a powerlifter, it was easier for him to step back and objectively assess what the best approach would be to ensure long-term gains from his use, a factor perhaps not considered by those whose primary concern is “*summer in Ibiza*” (‘Pete’, interview).

Indeed, reflecting on those users who did not plan out their cycles, Martin noted how, frequently, “*they’re in a shit state*” (‘Martin’, interview) owing to over-use of steroids straining their bodies. Wrestler Mariusz, similarly well-informed regarding PIED use, explained the science behind why high-dosage use of steroids gave benefits only with diminishing returns, but with ever increasing harms: “*your receptors get saturated to fuck, and it stops absorbing anything anyway... you have to make it reasonable... just because you take a lot more of it doesn’t [result in much better gains], it just fucks your side-effects up massively*” (‘Mariusz’, interview). Such a belief in the capacity for steroids to deliver only diminishing positive returns, but ever-increasing negative effects, was voiced by respondents in Monaghan’s (2001) study of bodybuilders in ‘hardcore’ South Wales gyms, indicating the prevalence of such an awareness in the ethnopharmacologies of serious users for some decades. Monaghan cites one respondent, ‘Gary’, who explains how there is a tendency amongst steroid ‘abusers’ to believe that “if 1 millilitre of so and so works for you, three times that amount must work better” (p.109), which he contrasts with the perceived ethnopharmacological reality of the more serious, experienced users that “the body can only take in so much” (p.109). As Monaghan (2001) notes, this awareness can “tip the risk-to-benefit ratio in favour of the former” (p.109) for bodybuilders who consider using a larger dose of steroids, explaining why many bodybuilders steered clear of such dosages. Indeed, as Hotten (2004) discusses, many of the professional bodybuilders interviewed in the course of his study doubted claims regarding their rivals’ PIED regimens, owing in large part to this reality of use, understood by the majority of competitive bodybuilders at that time³⁹.

The existence of such ethnopharmacological knowledge amongst ‘hardcore’ user groups for some years makes the fact that such information has not diffused to many image-focussed users a curious one. As discussed last chapter, there appeared to be some degree of ‘bridging’ transfers of knowledge between serious, competitive users, and their image-focussed and hedonic counterparts, in a number of areas. It appears, however, that many of the younger males who form this latter category have not absorbed such knowledge, and were unaware of the counterproductive effect excessive dosages could have. As ‘old school’ bodybuilder Big Steve bemoaned, “*These young guys don’t know how to do it properly... they take a load and blow up, and then as soon as they come off they shrink back down again. They’re big for about ten weeks, and then they lose everything they’ve gained*” (‘Big Steve’, field interview).

This cycle of inflation/deflation, identified by Big Steve, was noted as having been experienced by both

Pete's friend 'Mike' (above), as well as gym-goer Josh during his teenage, hedonic use ('Josh', interview), and was exacerbated by the large doses utilised by the individuals in question, which frequently amounted to more than "[the] body's able to keep up with" ('Martin', interview). As noted previously, Pete's friends were described as taking steroid pills and fat burners "like Smarties" ('Pete', interview), whilst Josh admitted he had "*abused*" steroids, simply taking whatever he felt would give him "*a quick fix*" ('Josh', interview). Big Steve identified how common this phenomenon was, drawing stark comparison between the abuse of "*young guys*" (hedonic-type users) in 2015 (when our interview occurred), with what was considered to be 'excessive' when he was training competitively in the 1990s: "*I know guys who are on a thousand milligrams of test a day... Back in the day, we would take sustanon-250, and some guys would take one amp of that every day [which was then considered extreme]*" ('Big Steve', field interview).

Evans (1997) noted how, in his research, only 12% of mainly competitive bodybuilders were using in excess of 1000mg of steroids per week (p.56), and these were the types Big Steve describes as having used an ampule (250mg) of 'sustanon' per day. If Big Steve's statement is factual, therefore, he is aware of individuals who use in a day amounts that in Evans' (1997) research were only used by a minority of the most hardcore users over the course of an entire week. Since Big Steve is rumoured to be a supplier (though would not confirm this in interview), it seems likely his assertions regarding the dosages young men in his gym are using are indeed accurate. The fact that "*young guys*" training for hedonic purposes are using *four times* what was once considered an excessive dose by competitive bodybuilders illuminates the stark divide between sport-oriented, and hedonic users, and suggests that Mariusz and Martin are unlikely to be exaggerating in their descriptions of "*[people] who do like way too fucking much*" ('Mariusz', interview) to ensure consistent, and lasting gains.

Evidencing this claim further are the comments of 'Dave', an older personal trainer working in a commercial gym, who stated he was considering commencing his first steroid cycle. Although more dedicated in his training than many image-focussed users, Dave nonetheless noted that he intended to start with "*just a low dose, 500mg [of testosterone] twice a week, or something*" ('Dave', field diary 14.08.2017). When I informed Dave that based on my research this was actually a comparatively high dose, he was surprised, noting that he got the impression from users in the gym that this was quite a standard 'beginner's cycle' (field diary 14.08.2017). A dose used only by 12% of hardcore bodybuilders in Evans's (1997) research was therefore considered a course for 'beginners' by a PT in a commercial gym home to many hedonic users, illustrating how divergent these groups' ethnopharmacologies are in this regard.

Based on the reports of respondents, including former "*abuse[r]*" Josh, and 'lad culture' member Pete, it indeed seems that, over the long-term, keeping doses comparatively low (i.e. those doses recommended by competitive users) gave a better, lasting result, than use which resulted in the process by which "abusers" would "*blow up*" then "*shrink back down*" upon cessation ('Big Steve', field interview), where "*all of his*

muscle, will just fall off him" ('Pete', interview). Of course, some of this "shrink" is also most probably caused by a lack of following correct post-cycle therapy protocols, as discussed in the previous chapter. However, it would still seem to be the case that, as theorised by Monaghan's (2001) bodybuilders, and competitive users in the present research, use beyond a certain level will simply give, in the words of a man who had experienced the phenomenon first hand: "*the illusion that your muscle has grown... when... in reality, you haven't made no gains*" ('Josh', interview).

The dosages utilised by competitive users are therefore worth considering, simply to contrast with those quoted by Big Steve, above. Both Martin and Mariusz opted to use lower doses of steroids, in Mariusz's case "like 500mg a week" ('Mariusz', interview) of testosterone, and in Martin's "just above TRT level... 250-300mg of test" ('Martin', interview), to ensure they did not experience the negative effects associated with excessive use. Likewise, although Rich began his first testosterone cycle ostensibly using 800mg/week, he noted that, given the perceived tendency for 'underground' labs to under-dose vials (confirmed in quantitative research, see Coomber *et al.* 2015*i*; Ritsch and Musshoff 2000; Llewellyn and Tober 2010), he felt he was realistically "maybe on 500mg of legit test a week" ('Rich', interview). Whilst the "gram... a day" of testosterone identified by Big Steve (field interview) as being used by some young men would likely have been similarly underdosed, these hedonic users would nonetheless have been taking close to 9 times the dose Rich, as a competitive Powerlifter, was using⁴⁰. Indeed, even the perceived "low dose" 'beginner's course' cited by Dave (above) was higher than the 800mg/week Rich acknowledged as a "high dose" for a beginner ('Rich', interview).

Interestingly, it was not only competitive users who appeared aware of the harms of using steroids in large doses. As noted in the previous chapter, Eddie stated that, although primarily an image-focussed user, he nonetheless used a testosterone dosage roughly equivalent to Rich's, which he identified as approximately one-third the amount that many of his peers within his local gym were using ('Eddie', interview). Although training for the purpose of becoming "210lbs with stacks of abs" (personal correspondence 20.04.2016), Eddie nonetheless was differentiated from his 'hedonic' peers in his use, which he attributed to a desire to increase self-confidence, and not to such factors as sexual competitiveness, intimidation, or 'social media' popularity, which appear to be the primary motivations of those who use in truly excessive amounts ('Pete', interview; 'Stephen', interview; 'Mark', interview). The experience of Simon, who used moderate doses in comparison to his friend who "*got really addicted to it cos he wanted to... grow quicker... get heavier quicker... because he wants to be better than everyone else*" ('Simon', interview) also helps solidify this pattern that, although competitive users tended to be more aware of the direct science behind using in moderate dosages, non-hedonic image-focussed users were nonetheless often aware that simply using a greater amount would not give proportionately greater benefits, and as noted in the previous chapter (and discussed further below), such individuals, including Simon, frequently followed many of the cultural norms identified in bodybuilding subcultures in the 1990s (Monaghan 2001), suggesting some cultural diffusion, which was largely absent amongst hedonic users, who had higher time-preference, and thus used in larger

doses in order to gain more immediate, if not lasting, results.

This pattern was not seen across the board, however, with some individuals who trained for non-hedonic purposes nonetheless using large, even excessive dosages, regardless of negative impact, or perceived diminishing positive returns. Robert attributed such use to psychological insecurities, such as the amateur bodybuilder who had been bullied his whole life for being short, and another bodybuilder whose father had wasted away from cancer ('Robert', interview; chapter four). In these instances, individuals who were non-hedonic in their use nonetheless took large dosages of the type typically condemned by the more competitive users. However, as Robert and others noted, this was not the typical pattern, and especially in the case of powerlifters, whose goal in use was perhaps furthest from that of the social media-oriented users, frequently the process of planning for consistent long-term gains, rather than large short-term benefits followed by a deflation (above), led to a situation wherein Robert would have "*no idea if [a powerlifter] is [using] or not*", because when done in the manner recommended by Martin or Mariusz, it was "*not obvious, that [they're] on gear*" without asking ('Robert', interview). Robert contrasted this with the typically younger, hedonic trainers, where he noted that "*a lot of the people who train here*" were very visibly on steroids, suggesting it was "*the world's worst-kept secret in a lot of people's cases*" ('Robert', interview). The fact that an outside observer noticed a significant difference between the apparent usage patterns of competitive powerlifters, and young members of the 'workout culture', supports the suggestion that the 'inflation/deflation' pattern of excessive use is more commonly followed by the latter, and similar observations were made by personal trainers ('Mark', interview), gym owners ('Stephen', interview) and as noted above, other users ('Big Steve', field interview).

It therefore seems that quantities used varied primarily based on the time horizons of the individuals involved. Whilst individuals such as Martin and Mariusz, who used competitively, would use in lower dosages, which they believed would allow their bodies to "*to keep up with the strength [gains]*", thus avoiding a harmful "*spiral*" upon cessation ('Martin', interview), those with higher time-preference, such as younger, hedonic-type users, would disregard this perceived inevitability, in order to make faster gains in the short term, at the expense of potentially harming their health, and longer-term progress.

The motivations behind such distinct patterns of use have been discussed, however it should be noted that the 'science' of PIED dosing was not as simple as merely accepting that 'less is more', as might be inferred from the responses quoted. Indeed, many of the problems associated with using in a harmful manner were related to specific drugs utilised, and the synergy different steroids had with one another. For example, Jim, one of the more knowledgeable competitive users, utilised "*1.2 grams*" of trenbolone a week at peak without harm ('Jim', interview), whilst others experienced negative effects on a lower dose of supposedly milder compounds ('Simon'; previous chapter). In order to fully understand the variance in longer-term patterns of use between competitive and hedonic individuals, therefore, it is necessary to investigate the ways in which steroids were perceived as interacting with one another in more depth, in order to explain how such apparent discrepancies might arise.

Compound Synergy and 'Stacking'

In addition to the overall dosage of steroids used, a further factor to be considered regarding intelligent dosing relates to the synergy of certain drugs with others, given that many users 'stack' multiple compounds (George 2005:153; Monaghan 2001:111), with the intention of receiving the differing benefits of the various products used (e.g. adding boldenone to a testosterone cycle to enhance repair). Monaghan (2001) noted his respondents would 'stack' various compounds, as opposed to using a higher dose of a single compound, to reduce negative side-effects, since the drugs would stimulate separate receptor sites (p.112), thus helping avoid some of the "*over-saturat[ion]*" Mariusz (interview) suggests is the primary cause of harm in excessive use (above). It is therefore worth considering differing approaches to 'stacking' taken by users in this study, to determine the extent to which such precautions and behaviours affected the longer-term experiences of the individuals in question.

As Mariusz makes clear, when following correct protocol, "*You have to be on test, it has to be the base of your cycle always*" ('Mariusz', interview). Owing to the capacity for 'androgenic' steroids (Monaghan 2001:98) to 'shut down' the body's endogenous testosterone production (Mottram 2005; Llewellyn 2011), all steroid users are required to either take a testosterone ester along with these drugs, or else employ steroid accessory drugs (e.g. HCG) to mitigate this harm (below), should they wish to use them safely. Whilst some drugs, such as oxandrolone ('anavar') are considered by many (including Martin (interview)) to be 'safe' to use without a Testosterone base (see Monaghan 2001:98 for the division between 'anabolic' and 'androgenic gear'), 'harder' steroids were deemed unsafe to use unless 'stacked' with testosterone owing to this effect, and such polypharmacy was therefore common to almost all users. This does not, however, mean all users followed identical protocols when 'stacking', beyond an awareness that some amount of testosterone was necessary in every 'androgenic' cycle, and approaches varied dramatically across, and even within, user groups.

Mariusz, for example, felt strongly that, when 'stacking' another drug with testosterone, one should reduce the amount of testosterone one was taking, owing to the potential harm that could be caused if 'hard' steroids were 'stacked' with a large dose of testosterone: "*If you do anything else with test, you should reduce test by a lot... because it saturates the hell out of receptors and then you end up having stuff like... tren or whatever just floating about, and that's when you get side-effects*" ('Mariusz', interview). Mariusz noted how, in many instances of harm supposedly caused by the use of specific, 'dangerous' drugs, it was in fact the combination of these drugs with a high dose of testosterone that caused the harm, suggesting that if the individual in question lowered their testosterone intake, they would not have

experienced such problems: “*people are like stupid and just trying to fill the fucking syringe for no reason, and they’re just doing way too much test with the other compounds, and the others are usually much more toxic than test*” (‘Mariusz’, interview), meaning if these products are left “*floating about*” because the receptors they would bind to have been “*saturated*” by testosterone, they will cause far more harm.

To reflect this perceived effect of ‘receptor saturation’, Mariusz noted how, when starting ‘tren’, often regarded as one of the most “*horrendous*” (‘Rich’, interview) steroids, he “*did that clever thing of doing more tren and less test... I went down to... one mil a week [of test]... So fuck all... the idea was the tren is so fucking strong that if it floats about, it can’t bind to anything, that’s when you get like the aggression and mood side-effects*” (‘Mariusz’, interview). Mariusz suggests that, as a result of reducing his testosterone intake to this degree⁴¹, he was able to use trenbolone “[without] getting any side-effects” (‘Mariusz’, interview). As a result, he was able to stay on tren for 14 weeks before ‘cycling-off’, and consequently received gains he termed “*ridiculous*” (‘Mariusz’, interview).

Although this effect is hard to verify medically, owing to lack of research into some of these chemicals in humans (which are in fact veterinary compounds (Llewellyn 2011)), Mariusz’s beliefs are reflected by many users on online forums, who have both tried the “*traditional [moderate] test to [low] tren stack*”, as well as the recommended “[low] test to [high] tren stack⁴²”, with positive results (ThinkSteroids.com 2014). One user, for example, notes that, by lowering the amount of testosterone used on-cycle, “*side effects in general are much milder*” and “*very rare*”, in comparison to those experienced when utilizing a higher dose of testosterone (ThinkSteroids.com 2014). Indeed, there are a number of online forums where users have posted similar experiences to Mariusz’s (UK-Muscle 2012; T-Nation 2013; Evolutionary.org 2015), again returning to the discussions of the previous chapter regarding the depth of online research conducted by different types of user, Mariusz having frequented forums of this type for some months before commencing use.

‘Jim’ likewise found himself able to use “*tren up to sort of 1.2 grams a week*” through following similar protocols, a dose that had the potential to be harmful, when used in conjunction with “*larger amounts of testosterone*” (‘Jim’, interview). As an example of such harm occurring through use of both drugs in high dosages, Josh noted how one of his friends in the gym was suffering from significant health problems, which Josh attributed to the large doses of trenbolone he was using, in conjunction with testosterone and HGH (field diary 27.03.2015). This assertion regarding the damage the individual had done to his health was similarly supported by Robert, although he did not point to a specific steroid as the cause, attributing the harm to a more general overuse of PIEDs, a common perception amongst those on the fringes of PIED-using cultures (‘Robert’, interview). The extent to which harm was specifically due to over-use of steroids generally, as compared to over-use of specific compounds, however, is interesting to consider, and in the context of Mariusz and Jim’s experiences using a ‘harder’ steroids without harm in high doses, such a discussion might suggest how the synergy of different drugs could be accounted for during the longer-term use of such compounds.

For example, even amongst users who were generally well-informed regarding the effects, and potential harms of PIEDs, trenbolone was considered a 'harsh' drug, with no suggestion that its harm was caused merely by its synergy with testosterone, indicating 'tren' should only be taking in sparing dosages, if at all ('Rich', interview; 'Eddie', personal correspondence 20.04.2016). This common perception, however, runs counter to Mariusz and Jim's experiences, which suggest that, when used in conjunction with "*TRT level*" doses of testosterone ('Mariusz', interview), the drug is not as harmful as generally perceived, and it is the synergistic effect that trenbolone has in conjunction with higher doses of testosterone that causes its infamous side-effects. To evidence this, it is worth considering that both Rich and Eddie, in their negative experiences using trenbolone, were utilizing the drug in conjunction with moderate doses of testosterone (500mg-800mg/week ('Rich', interview; 'Eddie', personal correspondence 20.04.2016)), whilst Josh's friend who developed severe health issues when taking the drug was using a dose of testosterone that by itself would have been considered excessive by sport-oriented users, even without 'stacking' this with trenbolone ('Josh', field diary 27.03.2015; 'Robert', interview). When compared to Mariusz and Jim's experiences using far more trenbolone without severe side-effects, therefore, it would seem that the specific synergy of steroids is indeed important in determining safe longer-term patterns of use, and once again there is a clear divide between those who are aware of these "*clever thing[s]*" ('Mariusz', interview), those who utilise other, simpler harm-minimisation methods (Rich; Eddie), and those who do not account for such effects at all.

Amongst image-focussed respondents, for example, Josh noted that when combining 'DBol' with testosterone in his teens and early-twenties, he had not considered any ways in which the polypharmacy of these drugs could have had a synergistic, negative effect ('Josh', interview). Likewise, Simon actually used *more* testosterone when taking the steroid 'deca', in order to off-set the probability of getting erectile dysfunction (below), noting this was what he had been instructed to do by peers ('Simon', interview), even if this runs directly counter to the safe protocol identified by Mariusz and Jim. Additionally, as noted above, many competitive trainers and others believed that hedonic users were unaware that poly-use of these drugs could enhance negative effects, and several commented on the sheer amounts of various compounds used by such persons ('Robert', interview; 'Mariusz', interview). Whilst Pete's friends would take "*anything*" they felt would give the desired result ('Pete', interview), without conducting additional research into the compounds they sought to 'stack', Big Steve noted how "*90 percent*" of young male users "*take it without learning about it*" ('Big Steve', field interview). Image-focussed, and particularly 'hedonic' users, appeared to be largely ignorant of synergistic effects, therefore, and when an awareness did exist, it tended to be of the type identified by Simon (above), such as increasing testosterone to avoid erectile dysfunction when on drugs that can cause such effects, as opposed to accounting for potentially more harmful side-effects, as identified by Mariusz (interview).

Even in the case of serious users, such as Rich and Eddie, although they were aware that 'stacking' drugs could potentially be harmful, and must therefore be accounted for when planning one's 'cycle', there was

no real awareness of the type of solution recommended by Mariusz, and indeed both men simply chose to ensure the dose of the added drug was moderate, rather than reduce their testosterone intake, to account for the new substance they were introducing. As noted, both Rich and Eddie used a low trenbolone dose in conjunction with a moderate testosterone dose, directly counter to the protocol recommended by Mariusz, as they knew 'tren' was considered a particularly potent steroid, and wished to minimise the risks of harm, whilst maximising the benefits offered by the drug ('Rich', interview; 'Eddie', personal correspondence 20.04.2016). Since Rich learnt to use from Jim, and Eddie was advised by a medical professional (previous chapter), one might assume they would be aware of how to use such drugs in the safest, most intelligent manner identified, yet both experienced negative side-effects that Mariusz, and commenters online, stated they did not receive when using "low test, high tren". Although Rich and Eddie both stopped using trenbolone in response to negative side-effects, and therefore did not experience serious harm as a result of use, it is nonetheless interesting to note the difference between these two 'dedicated' users, and Mariusz, who used a higher dose without issue⁴³.

It was not merely 'social' image-focussed users who were ignorant of the advanced 'stacking' protocols identified by Mariusz and Jim, therefore, although such individuals tended to experience the most serious side-effects when utilizing 'hard' steroids. This might suggest the exaggerated harms experienced by the individuals Mariusz identified as "*stupid*" and "*doing way too much test*" ('Mariusz', interview) were primarily linked to hedonic individuals such as Pete's friends, and those Robert criticised for their harmful, excessive use, who took large amounts of all the drugs they used, and did not have knowledge of potential synergistic effects ('Robert', interview). Those who scaled back the use of at least one compound when 'stacking' multiple products tended to experience less severe side-effects, although evidently in cases such as Rich's, it might be suggested that the harms he did experience on tren ("*throwing up*", "*insomnia*" ('Rich', interview)) were a result of getting the ratio incorrect when 'stacking' the drug with testosterone. In spite of experiencing some side-effects from stacking the two drugs in this manner, Rich was nonetheless not guilty of "*just trying to fill the fucking syringe for no reason*" ('Mariusz', interview), as some hedonic users did, and it appears likely that, although synergy of compounds is important, the total dose used is a more important factor in determining harm, and thus identifying 'abuse' (see 'significant health risks', below).

Mariusz's process of use indeed appears to be a somewhat novel approach to steroid 'stacking', and indeed, judging by commentary in some of the online forums cited, it would appear Rich and Eddie's approach to poly-use of testosterone and trenbolone was considered 'standard practice' by many, and hence was referred to as the "*traditional*" stack on these boards (ThinkSteroids.com 2014). In this context it is worth noting that Rich ran his tren cycle in early 2012 ('Rich', interview), and it is difficult to find forum threads discussing "*low test high tren*" from before that period (Google search conducted on 30.08.2016⁴⁴). For example, in December 2012 an administrator on Superiormuscle.com (2012) noted how this process was "*pretty much the opposite of what [he] was thinking*" made sense when using trenbolone, indicating how recently this shift in knowledge regarding 'stacking' processes has occurred. It is perhaps therefore

unsurprising that only two of the best-informed, competitive users (Jim and Mariusz), were aware of this change in the accepted online ethnopharmacology, as it would appear to be a comparatively recent phenomenon. This ties in with the previous chapter's discussion of the processes by which different groups learnt to use PIEDs, and again demonstrates how the most studious researchers were able to take such knowledge, and apply it to their longer-term usage patterns, in order to achieve the lowest risk relative to the benefits of using these drugs (Martin, having always used a 'TRT dose' of testosterone, essentially achieved the same result when 'stacking' as Mariusz and Jim, without needing to reduce his testosterone intake).

Synergistic effects extended beyond a need to lower testosterone doses when adding 'harder' compounds, however, and there was a large degree of ethnopharmacological knowledge amongst competitive users regarding which compounds 'stacked' best. The popular drug boldenone-undecylenate ("equipoise"), for example, was frequently utilised by competitive, and non-hedonic image-focussed users, alongside their regular testosterone cycles, since it was believed to have complementary effects to testosterone ('Rich', interview; 'Eddie', interview), with Martin being the only serious male lifter surveyed to have never used the drug ('Martin', interview)⁴⁵. Although Mariusz cautioned that, if used alongside a high enough dose of testosterone, boldenone could similarly "*float about*", in the manner of trenbolone ('Mariusz', interview; above), the drug was nonetheless perceived as being reasonably 'safe', provided one accounted for its long half-life (below). There was therefore an intricate developed ethnopharmacology observed amongst competitive respondents, with a distinct hierarchy of use identifiable, demonstrating Monaghan's (2001) observations regarding an ethnopharmacological taxonomy of anabolic-androgenic steroid use (p.98) remain applicable to 'hardcore' users in the present day, even if there have been some developments regarding 'accepted practice' in the intervening years.

This contrasts with the observations noted above regarding the approach of hedonic users, which illustrate that such a hierarchy of synergistic use does not appear to exist for this group, at least so far as the harmfulness of particular compounds or combinations is concerned. Pete and Josh's friends utilised compounds solely based on their perceived positive effects, such as the ability to give a "*hardened look*" (Josh, interview), and although such users might show some awareness that certain products were typically associated with more harmful side-effects, did not appear to plan their use according to these effects ('Pete', interview; 'Josh', field diary 27.03.2015; 'Robert', interview). This division between the groups' respective understandings of appropriate dosages and synergy of compounds does not, however, indicate a complete lack of awareness regarding safe usage on the part of hedonically-motivated users, since despite this apparent lack of an ethnopharmacological taxonomy of the kind identified by Monaghan (2001:98), hedonic and image-oriented users nonetheless appeared to follow the harm-minimisation policy of 'cycling' compounds (Gilbert 1993), evidencing the existence of a common understanding of acceptable approach, across these otherwise apparently divergent ethnopharmacologies. It is to this method of harm reduction that this chapter shall therefore turn, since 'cycling' would appear to be an integral part of steroid use for

individuals from every user group, and thus crucial for understanding the practice of using PIEDs.

'Cycle' Lengths and Rest periods

Last chapter, reference was made to the planning of PIED 'cycles', and 'post-cycle therapy' (PCT) courses. 'Cycling theory' has existed for a significant period amongst steroid-using subcultures, and is followed for both harm-reduction (Gilbert 1993; Broom and Tovey 2009), and performance maximisation (Monaghan 2001) purposes. Monaghan (2001) notes that "while various factors pattern steroid use... a 'therapeutic' regimen aimed at maximising gains while minimising potential harm is informed by '*cycling theory*'" (p.106). Since prolonged use of steroids correlates with negative health events (Llewellyn 2011; Mottram 2005; Voy 1991), cycling theory has historically revolved around an assumption that periods of steroid use should be balanced by sustained periods 'off-cycle'. As Monaghan (2001) notes, it is additionally believed by many bodybuilders that 'receptors' require a period of rest after being 'saturated' for a sustained period when the individual is 'on-cycle' (p.108), a process alluded to above. Given the significance accorded this phenomenon in the literature, it is worth considering the approach different users in the current research took to 'cycling' steroids, and conclusions that can be extrapolated from this area of use.

As noted, Martin was incredibly studious when preparing to use PIEDs, and consequently followed a strict process of "*10-12 weeks [on-cycle]... then have a four week PCT period, then a 12-15 week 'off' period, where I don't touch anything*" ('Martin', interview). Having conducted in-depth research into PIEDs, Martin believed such usage was effective in preventing him both from following the 'inflation/deflation' cycle referenced above, as well as ensuring he was never using for such a long period as to "*cause myself harm*" ('Martin', interview). This is interesting, as it demonstrates that Martin, as a powerlifter, followed a similar pattern to Monaghan's (2001) bodybuilders in terms of period of use, and PCT period, albeit with a marginally longer rest period (which might be explained by the increased CNS fatigue associated with powerlifting routines).

From this, it would appear the protocols regarding periods of use followed by Monaghan's (2001) bodybuilders, as well as their motivations for following them, are still considered appropriate, and indeed 'Eddie' followed a similar approach to this, undertaking "*ten weeks of the test and equipoise and then two weeks of the nolvadex [PCT]*" ('Eddie', interview), followed by seven months off-cycle ('Eddie', personal correspondence 20.04.2016). These findings indicate that for many informed users, patterns of 'cycling' have not altered much from the 1990s (Monaghan 2001).

Of course, not all users were so informed regarding such 'generally accepted' protocols as Martin and Eddie, and there were consequently notable instances of respondents admitting to having used without an

understanding of ‘cycling theory’. Josh for example noted that, as a younger, less-informed man, he had used steroids without ‘cycling-off’, or using PCT drugs, stating his use of steroids “*was just literally... all the time... sort of thing*” for a period of “*a few years*” between the ages of 18 and 22 (‘Josh’, interview). Similarly, Simon discussed how a friend did not begin ‘cycling’ compounds until Simon told him to come off testosterone, suggesting “*you should probably come off – just have like 20 weeks off and if you wanna get back on ‘em, get back on ‘em*” (‘Simon’, interview). Whilst the fact that some image-oriented users did not follow established cycling protocols is perhaps unsurprising, given the general lack of knowledge in this group compared to their sporting counterparts (previous chapter), it is notable that the dereliction to follow this prescribed norm of sport-oriented users was not in fact common to the majority of image-oriented users, even when it came to younger, hedonically-motivated ones.

Whilst there were some instances of image-oriented users taking steroids for prolonged periods without ‘cycling off’, these individuals appeared to be the minority, even when including hedonically-motivated young men. In his criticism of the “*young guys*” in the gym (above), Big Steve was quoted as noting how, “*as soon as they come off they shrink back down again... they lose everything they've gained*” (‘Big Steve’, field interview), indicating these young men were using excessive dosages, and relying on the drugs more than intelligent training, and diet, to give them size. As uninformed as these young men, who Big Steve notes form a majority of the gym clientele nowadays, might be, it is important to note the implicit suggestion that they are ‘cycling’ steroids, since the ‘inflation/deflation’ observed by Big Steve is in part caused by cessation of use of these excessive dosages. However poorly informed these young men were regarding sensible dosing, therefore, they appear to have at least a rudimentary understanding of the principle of ‘cycling’ compounds (though as Big Steve notes, are evidently not so well-informed as to properly plan their training around the cycle (‘Big Steve’, field interview)).

Indeed, even Pete’s social group, who epitomise the hedonic, social media-oriented user archetype, ‘cycled’ steroids, despite ignoring most other prescriptions for safe, and effective use. As Pete noted, even though his friends would take drugs “*like Smarties*”, they would nonetheless ‘cycle-off’ PIEDs at regular intervals: “*However long [Mike] does his course, once he stops, all of his mass, all of his muscle, will just fall off him.*” (‘Pete’, interview). As noted previously, *Mike*’s reaction to losing mass upon ‘cycling-off’ was simply to use a larger dose next time, however it is curious that this group, who don’t use PCT, or plan cycles in advance, or moderate their doses, nonetheless ‘cycle-off’, in the manner of competitive users. Pete was not able to explain the reasons for this seeming discrepancy, however it is possible the higher time-preference noted previously might contribute to the group’s using steroids in this manner: If one is simply training for “*summer in Ibiza*” (‘Pete’, interview), then in the period following summer partying, they may simply allow their PIED use to lapse, until the next reason to be ‘in shape’ arises. This might explain why young, hedonic users are noted by several respondents as visibly appearing to ‘cycle’ steroids, despite apparently knowing little else about use.

An alternative to this possibility could be that, as Mariusz notes (previous chapter), suppliers will have a

vested interest in directing customers towards appropriate compounds and use, meaning even those who are looking for “shortcuts”, and use well above recommended doses, are at least made aware of the principles of ‘cycling theory’⁴⁶. Whatever the reason, it is noteworthy that this element of previously ‘hardcore’ sporting use has nonetheless ‘bridged’ the divide to become part of the broader ethnopharmacology of PIED users as a whole, and not merely the reserve of those who have conducted academic research into usage, suggesting a normalisation of at least some processes of use, even between otherwise diverse groups.

Interestingly, there were some indications during the course of data collection that conventional knowledge regarding effective ‘cycling’ of steroids, which as noted appears to have filtered down to almost all user subcultures, might now be considered ‘outdated’ amongst the most serious competitive trainers, as awareness of half-lives, and biological mechanisms of PIED use, begins to increase. It is therefore worth investigating the ways in which some of the apparently better-informed respondents departed from the conventional wisdom of PIED cycling, analysed above. This happened in two key ways: a greater awareness of the effects of half-lives of products, and the concept of ‘cycling’ through varying dosages, as opposed to cessation/recommencement of use. These developments shall therefore be discussed in turn.

Evolution of ‘Cycling’ Ethnopharmacology: Half-Lives; “Blast and Cruise”

As noted last chapter, Powerlifter Rich stated that when ‘cycling’, one had to be aware of the half-lives of drugs used, since this would affect the length of time one could take each compound. As an example, Rich suggested that, when using a testosterone and boldenone ‘stack’, one should cease use of the boldenone some weeks before coming off testosterone, because boldenone *“stays in your system a lot longer, cos it's got the long half-life”*, resulting in the boldenone still suppressing the body’s natural testosterone production whilst no exogenous testosterone is being added to mitigate this effect, if both are ceased simultaneously (‘Rich’, interview)⁴⁷. Rich similarly applied this rationale to ‘tapering-on’ to steroids, noting it would take a longer period for a compound with a longer half-life to *“stabilise”* in the blood, based on the same principle (‘Rich’, interview).

Although seemingly a simple analysis of the mechanics of use, this focus on half-lives appears to be a recent phenomenon in user ethnopharmacologies, at least to the degree of focussing on the precise levels substances will have in one’s blood following a given period of use, or cessation. In Monaghan’s (2001) extensive ethnography, for example, the only references to half-lives made by the bodybuilders surveyed are in the context of how “fast-acting” a product is (p.104), with no reference to any need to scale one’s use to the half-lives of different products taken. This pattern is seen throughout similar, non-medical studies

(Klein 1995; Evans 1997). Indeed, when references to half-lives of steroids are made in the existing sociological literature, these are generally discussed only in relation to the amount of time a product is detectable in an athlete's system (Voy 1991; Waddington 2000), and not to different protocols of use, with this understanding of half-lives seemingly becoming prominent only with the rise of the internet in recent years.

This finding is significant, since it again supports the analyses of the previous chapter. Undoubtedly this new awareness regarding particulars of use was fuelled by the rise of online forums, where expert knowledge can be easily diffused to studious users, and indeed, of those respondents who mentioned the necessity of tailoring use to half-lives, every one had spent time researching use on such forums. Once more, this supports the notion that a new, highly-informed class of user is emerging thanks to the wealth of information available to those who wish to access it, and it is interesting to note the effects such information has had upon the ethnopharmacologies of competitive users.

In addition to a knowledge of half-lives being useful in determining the clearance time of a product from one's system, and therefore valuable for the purposes of harm minimisation, and avoidance of negative events, such an awareness was equally valuable in planning one's cycle, and using steroids to their maximum effect, as Mariusz noted when discussing why he had more success than less "*patient*" individuals when cycling: "*it takes, like... weeks... for equipoise to even start saturating... it's... very slow building, very long ester... so most people go for [faster acting steroids]*" ('Mariusz', interview). As a consequence of the longer half-life, and therefore longer period until "*saturation*", Mariusz found great success in using for much longer 'cycles' than those typically adopted historically by 'hardcore' users (Monaghan 2001; Hotten 2004), or modern, 'hedonic' users (above): "*I tend to do it for like six to eight months... then I go off for four months*", "*the longer you're on it, the more it stays, basically*" ('Mariusz', interview).

Perhaps most significant in this analysis is the revelation that those users who appear least informed are actually using in the manner closest to Monaghan's (2001) bodybuilders, and other groups of 'informed' historic users (Klein 1995; Evans 1997), whereas those who appear to have conducted the most research seem to be deviating from these 'standard practices' in ways which might even appear harmful, based on the analyses of respondents in these prior reports (Monaghan 2001:104). This evolving ethnopharmacological taxonomy is perhaps demonstrated most clearly in the case of which drugs are considered 'harmful' versus 'safe' by modern competitive users, compared to those surveyed previously (see 'avoiding specific drugs', below). However, in the case of 'cycling', it is worth noting a trend towards the practice of 'blasting and cruising', or never ceasing use of steroids (Sagoe 2015), amongst serious competitive trainers, a practice that historically would have been considered "abuse", observed only in those who "didn't have a clue", and useless from a physiological perspective (Monaghan 2001:109).

Whilst cases such as that of Josh during his teenage years, wherein he used for a prolonged period in high dosages ('Josh', interview), would still be considered harmful and ineffective by informed parties, the idea

that one needs to actually cease use following a ‘cycle’ has come under debate with the rise of online forums. This phenomenon, known as ‘blasting and cruising’, is described by a forum member on *UK-Muscle* as follows: “[Blasting and cruising is] the same as cycling and PCT [but] instead of doing PCT after you’re (sic) cycle you cruise on a low dose of test until you start another cycle” (*UK-Muscle* 28.09.2009). The reasoning behind this is twofold: continuous use in high dosages is harmful to health and saturates receptors, so must be avoided; however, cessation of use leaves one susceptible to negative effects such as depression and lack of libido, so an Aristotelian mean is considered the optimum path. By lowering one’s use to a simple “cruise on a low dose of test” (125-250mg/week), the user avoids receptor over-saturation, since they have essentially ceased using supra-physiological doses (and non-endogenous types) of compounds, and are merely supplementing with replacement testosterone instead of reactivating their endogenous production through use of HCG, or similar accessory drugs (see below). Simultaneously, because there is never a period of transition from exogenous to endogenous testosterone production, there is no transition gap, which in traditional ‘cycling’ (on cessation) leads to a 2-4 week period of ‘crash’, even if done correctly. To summarise the difference, another *UK-Muscle* forum user notes: “Blast cruise = feel like a real man all the time, cycling = cry like a girl and watch rom coms during off period... No brainer IMO” (*UK-Muscle* 01.02.2010). The benefits of this methodology of use therefore seem clear, and as a result the former seemingly-unassailable institution of ‘cycling’ no longer appears to be definitively the optimum pattern of use.

Although few respondents had actually participated in ‘blast and cruise’ cycling, there was certainly an awareness of this method amongst sport-oriented respondents, with four referencing the phenomenon in some way. Rich, for example, asked in interview whether I knew “*about like blasting and cruising*” (*Rich*, interview), stating he had considered doing it to avoid the crash associated with the post-cycle period. Rich had not gone through with a ‘blast and cruise’, because he had moved on to human growth hormone instead of steroids, which does not depress endogenous testosterone, and therefore avoids the ‘crash’ upon cessation (*Rich*, interview; Llewellyn 2011). However, Rich suggested this approach seemed optimal for one who “*wanted to be a monster lifter*” (*Rich*, interview), since the lack of ‘crash’ would allow them to keep training more consistently, whilst the ‘cycling-off’ of harder compounds than testosterone would help to avoid the ‘over-saturation’ commonly identified as a failing of less-informed users. Indeed, Rich spent some time training with Jim whilst “*Jim was doing blast and cruise*” (*Rich*, interview), and noted that Jim’s performance whilst following this protocol had appeared impressive, undoubtedly influencing Rich in his view that ‘blast and cruise’ was an effective approach to cycling.

Martin was more reserved in his judgement of ‘blasting and cruising’, remaining sceptical of the concept, being one of the more cautious users surveyed, and therefore less willing to violate established ‘norms’ of use amongst hardcore lifters, but also having witnessed first-hand people who did not cease use for prolonged periods, observing: “*A lot of them [are frequently] ill... because your immune system's just struggling*” (*Martin*, interview). Nonetheless, as a serious lifter competing in a high-level federation, Martin was open to experimenting with blasting and cruising in future, depending on how his body reacted to

traditional cycling: “*it's something I've thought about, but... [I'm on] only my second course so... five, six, seven in I might think about doing it, see how it affects me*” (‘Martin’, interview). Noting one of the largest motivating factors was to avoid the ‘crash’ inherent with cessation, Martin commented that he had bought some of the steroid accessory drug ‘ostarine’, because “*PCT... duration [is] shortened so much by using it*” (‘Martin’, interview). Consequently, Martin’s plan was to “*see... how quickly I respond on my PCT, whether my balls kick back in quickly*” following his current cycle, and if even with the ostarine he felt the ‘off-period’ transitioning between exogenous and endogenous testosterone was too great, might then consider in future replacing complete cessation with a “*cut down [on testosterone] just to keep my balls ticking over, and stay on a constant for, like, two to three cycles, see what happens*” (‘Martin’, interview).

As the only individual surveyed to have actually tried blasting and cruising, Jim noted the protocol had its upsides, but stated he had eventually decided to come off, since he was aware continuous usage could potentially be harmful to his cardiovascular health⁴⁸, and once he ceased lifting competitively, had less motivation to keep using (‘Jim’, personal correspondence 14.10.2016). Interestingly, Jim went beyond the protocol of ‘blast and cruise’ identified by the *UK-Muscle* posters (above), and noted how he tapered use based on where he was in his training cycle, gradually increasing his use of testosterone during the “*overload*” phase of his training regimen, and dropping it back sharply during his “*deload*”, when he did not lift weights, following his maximal training phase (‘Jim’, personal correspondence 14.10.2016). As a national-level competitor, and PIED supplier, with a chemistry degree, it is perhaps unsurprising that Jim would experiment with the newest innovations in steroid use, and might therefore be something of an outlier when it comes to patterns of use in the population more generally. However, the prevalence of ‘blast and cruise’, and other advanced ‘cycling’ theories on online forums (above) suggests that, in the world of ‘hardcore’ lifters, such practices are by no means unusual. This indicates the shift in ethnopharmacology in recent years, in addition to further supporting the suggestion that use is becoming ‘normalised’, if a seemingly esoteric form of use, unheard of in much of the literature, is now prevalent enough to have so much exposure online⁴⁹. Indeed, references to ‘blasting and cruising’ in recent academic literature, published after many of the interviews had been conducted for this research (Sagoe 2015; Rowe *et al.* 2016), indicate the growing significance of this methodology of use, which was previously unreported outside of bodybuilding forums, and similar sources. It is therefore reasonable to anticipate that, with the growth in the internet as an information source for drug users (Evans-Brown *et al.* 2012), this method of use will likely increase in the future, and perhaps spread to other user subcultures.

Such changes to the ethnopharmacological taxonomies of user subcultures shall be a common theme of this chapter. These developments, however, can only be understood in the context of patterns of use more generally, and it is worth therefore returning to other means by which users sought to minimise harm, principally through the avoidance of particular compounds, and adapting of one’s broader lifestyle.

Avoiding Orally-Administered ('Alkylated' and 'Methylated') Steroids

The primary means of reducing harm amongst respondents was a refusal to take certain types of PIED, owing to an awareness of harms associated with them, whether discovered through independent learning, or socially-acquired knowledge. As noted last chapter, image-focussed user Simon made the decision not to take orally-administered steroids ('orals' (Monaghan 2001:102)) owing to their potential to damage the liver (see Mooney and Vergel 2003; Kuipers 1998; Llewellyn 2011), opting to take only steroids delivered via intra-muscular injection ('injectables'), to avoid these harms ('Simon', interview). Whilst naturally exposing Simon to risks not associated with oral-only use (below), this approach received approval from several better-informed individuals, since harm to one's organs had the potential to be far more serious long-term than likely adverse effects from injecting: "*one of the key things is they hammer your liver... pill forms are more toxic to your liver*" ('Robert', interview).

Having decided not to take steroids after conducting significant research into the potential harms, Robert noted it was clear that orally-administered steroids were more toxic, and thus had more potential to cause both long-term harm, and shorter-term adverse effects, than injectable testosterone⁵⁰. As Llewellyn (2011) notes, almost "every oral steroid... is a c-17 alpha alkylated compound and should be avoided", owing to their capacity for "strong liver stress" (p.112), confirming Robert's analysis. Whilst Robert was evidently more cautious in his approach than most, having ruled out using steroids following his research, this same harm was similarly identified by competitive users who themselves used 'orals', but were critical of those who used them without an awareness of these harms: "*Everybody's scared of syringes, so they... buy pills, basically, capsules. [Some get methyltrienolone] – it's like the most fucking toxic steroid ever! So they already fuck their liver up... from the beginning*" ('Mariusz', interview)⁵¹.

As someone who tried, and disliked, the oral steroid dianabol, Mariusz was clearly willing to risk taking orally-administered products, but only after accounting for the potential harms of so doing (see Llewellyn 2011:114). As Mariusz noted, his ultimate conclusion, after two weeks of experimenting (following a period of research), was that use of such drugs "*wasn't worth all that shit*" ('Mariusz', interview). As shall be discussed next chapter, 'DBol' had a negative effect on Mariusz's mood, but he also disliked having to take "*liver supplements*" (below) daily, without which he would "*immediately start feeling [liver] pain and stuff, basically [because it] fucks with you*" ('Mariusz', interview). As noted, many 'dedicated' users had a policy of ceasing use of products they felt were causing them harm, Mariusz included. Ultimately, based on his experience of 'DBol', grounded as it was in extensive research that informed him what the cause of this "*pain*" was, Mariusz concluded, in keeping with this stated policy, that 'orals' were "*one I probably won't be taking again*" ('Mariusz', interview).

A number of competitive users took a similar approach to 'orals', making a risk analysis prior to use, and adapting behaviours to minimise harm, including stopping use entirely if necessary. Powerlifter Rich described his negative reaction to the drug anadrol, documenting how he ceased use at the first sign of a side-effect (bad nausea) which indicated (based on his research) his body was struggling to cope with the drug ('Rich', interview). Reacting to this symptom with complete cessation of the newly-added compound, Rich made clear he was acting on an awareness of the enhanced risk 'orals' represent: "[orals] mess with your liver... [so I decided I was] better off going for [just] injectables... rather than the orals" ('Rich', interview).

Those users who experimented with 'orals' in this manner were testing their bodies' reactions to the drugs, coming back to the frequently cited principle of "*I may react differently, others may react differently*" when using various PIEDs ('Eddie', interview). Since PIEDs were seen as varying greatly in effect based on the user's individual hormone profile, and other biological factors (and the fact most steroids come from 'underground labs', meaning dosages are not held constant (Coomber *et al.* 2015*i*; Ritsch and Musshoff 2000)), the many non-hedonic users who were generally cautious in their approach would perform such experiments, to test the advice they had accrued elsewhere. Rich was advised to use anadrol by Jim, for example, who having used "*essentially every substance I could think of*" ('Jim', interview) in his capacity as a supplier, undoubtedly felt the benefits of the drug outweighed its risks, and indeed in our discussions never noted anadrol as being a particularly 'harsh' steroid in his own experiences ('Jim', interview). However, Rich noted the drug affected him more negatively than it had Jim, so suspended use, owing to fears of long-term harm. This awareness of necessary medical concerns, combined with a cautious approach to use, allowed experimentation with potentially-harmful drugs, which sometimes resulted in complete cessation of use, and at other times generated surprising, positive outcomes: "*I think I'm like the only person on the planet who didn't get [bad] side-effects from [trenbolone]*" ('Mariusz', interview).

Other respondents were not so averse to using 'orals', however, even when aware of such potential harms. Whilst in image-oriented trainer Josh's case this was based on a rational calculation that the inherent risks of oral steroids were preferable to those of injectables ('Josh', interview), following a negative experience injecting (below), competitive powerlifter Martin, perhaps the most knowledgeable and cautious user surveyed, felt that using oral steroids intelligently, combined with an awareness of additional beneficial supplementation, and the monitoring of one's general health, made their use worthwhile ('Martin', interview). The use of such accessory supplements shall be discussed below, however it is worth noting here that, even amongst the most serious competitive users, there was no unanimous opinion regarding whether 'orals' were 'worth the risk' or not, with Martin and Jim happy to use these products, whilst Mariusz and Rich decided subsequent to experimentation that they were not "*worth all that shit*" ('Mariusz', interview). Everything came down to the individual's own weighting of cost-to-benefit in rational analysis, based on personal disposition, but in all cases involving non-hedonic users was carefully considered, especially amongst competitive, sport-oriented individuals.

The same, perhaps predictably, cannot be said for their 'hedonic' counterparts, however, with a general ignorance of the potential negatives of steroid use seemingly widespread within this group, as previously discussed. Although findings regarding the hedonic user-group are based largely on discussions with their peers, and those who have encountered them in training environments, rather than the users themselves, the general pattern within this subculture nonetheless seems clear: "*these lads, they've got no issue putting stuff into their body*" ('Pete', interview).

As Mariusz was quoted as stating above, many "*gym rats*" would happily ask to be supplied with "*the most fucking toxic steroid ever*" ('Mariusz', interview) if it meant they would not have to worry about injecting themselves, and as Josh confirms, based on his time as an hedonic 'lad': "[my friends] were doing... *dianabol*...and they got me thinking, 'well, if I can have a quick fix... why not take the... *dianabol tablets*?' ('Josh', interview). Although Josh would later admit taking a "*hard*" steroid without any research or preparation was foolish, it took him several years to come to this realisation , and it is likely many young men who are currently using are in a similar position, "*going along with*" friends ('Josh', interview), unaware of the potential negative consequences of so doing. As documented last chapter, Pete's friendship group certainly take these drugs without concern for potential adverse effects, a factor he attributed in large part to "*social media culture*" ('Pete', interview), whilst as personal trainer Mark noted, many PTs who encourage clients to use these products have no incentive to care about the person's health beyond helping them achieve their short-term goals, likely exacerbating such problems, since the financial incentives for over-recommending use are simply too great for some PTs to ignore ('Mark', interview).

It therefore seems that, as in other areas of use, there is a distinctive split in the approach to orally-administered steroids between 'hedonic' users, and their competitive counterparts, even if ultimately some sport-focussed users decide to take these drugs. The difference in dosages utilised by each is telling, however. Whilst Rich took one 25mg 'anadrol' pill per day before deciding the side effects were not worth the benefits after "*literally... about seven days*" ('Rich', interview), Pete confirmed that one of his friends might take four different types of pill, and up to six doses of each ('Pete', interview)⁵², whilst Mariusz observed some "*gym rats*" taking what he felt to be "*just ridiculously unhealthy*" doses ('Mariusz', interview). Indeed, as noted last chapter, even after becoming aware of the potential harms of 'harder' drugs such as dianabol, Josh nonetheless followed his trainer's advice regarding how much 'avar' to take, which came to "*200mg a day*" ('Josh', interview), significantly above the "*usual dosage for physique or performance-enhancing purposes... range of 15-25 mg per day, taken for 6-8 weeks*" described by Llewellyn (2011:176).

Josh's case also suggests that, in addition to some young men simply not being concerned for their health (as with Pete's friends; below), personal trainers are equally involved in misleading clients, recommending doses that competitive powerlifters would not contemplate using, in spite of their generally higher bodyweight, and therefore tolerance (Voy 1991:18), supporting Mark's concerns regarding the lack of good quality information given by trainers ('Mark', interview). To illustrate this point, Martin, who weighs some

15kg (33lbs) more than Josh, and who used anavar in the highest dose of any competitive user surveyed, at maximal dose was using “*up to 100mg a day*” (‘Martin’, interview) – fully *half* the dose Josh’s personal trainer recommended to him as a base dosage (‘Josh’, interview), which nonetheless was still far higher than that recommended by Monaghan’s (2001) bodybuilders (p.111). Since the alkylated drug has the potential to “result in liver damage” when used in “high or prolonged” doses (Llewellyn 2011:174), this imbalance of knowledge between the two user-groups suggests the potential for serious harm in the case of less-informed, image-focussed users⁵³.

Indeed, when one considers that Martin took extra precautions to protect his health and liver function, which many in Josh’s position would not take (although Josh’s personal trainer did in fact recommend such measures to him), this knowledge imbalance becomes even more important, and the lack of awareness of harms associated with ‘orals’ amongst non-competitive users indicates a potential public health concern, if use genuinely is rising at reported rates (see Guardian 19.06.2015; Bates and McVeigh 2016). Such measures as Martin employed to minimise harm shall be discussed below, however it is worth noting that orally-administered steroids were not the only type of steroid frequently believed by competitive users to be harmful, and therefore treated cautiously.

Although Simon was careful to avoid the negative effects of ‘orals’, as his sport-focussed counterparts would have recommended, he nonetheless pursued a ‘cycle’ that many ‘competitive’ respondents would consider equally harmful, demonstrating once more the significant gap between what image-focussed individuals might regard to be ‘cautious’ use, and that described by the more knowledgeable sport-oriented respondents. The fact that this ‘knowledge’ runs directly counter to that collated in the literature (Monaghan 2001; Fussel 1991; Evans 1997; Voy 1991) makes an exploration of this further avoidance of specific drugs even more intriguing, and necessary to investigate, in order to determine the reasons for this developing separation in taxonomic hierarchies between rival ethnopharmacologies (Monaghan 2001).

Avoiding Specific Drugs

‘Deca-durabolin’ (nandrolone-decanoate) was identified as one of the PIEDs most commonly used by Monaghan’s (2001) respondents, who listed the drug as the most important to their cycles after the testosterone blends (e.g. ‘sustanon’) (p.98). Evans (1997) similarly identifies the drug as one of the more popularly-utilised PIEDs, and indeed even in the most recent statistics available regarding use in the UK, ‘deca’ was as popular as testosterone-enanthate – the most popular testosterone ester – amongst those surveyed, with some 38 percent of survey respondents having used the drug in the previous year (Bates and McVeigh 2016:6), consistent with the findings of Perry *et al.* (1992), who placed prevalence at 37 percent.

This is worth noting, since other than Simon, respondents who mentioned the drug almost unanimously dismissed it as not giving gains commensurate with its side-effects, with many indicating that “*I [am not] using... the likes of deca, or anything like that... I think if I did, something [negative] may happen*” (‘Eddie’, interview).

Rich, for instance, was concerned about ‘underground’ labs selling ‘deca’ in place of the harder-to-acquire boldenone (a concern shown to be valid by Llewellyn and Tober (2010)), and although he acknowledged that nandrolone had the same desirable healing properties as boldenone, nonetheless insisted that “*I don't want deca if I can avoid it*” (‘Rich’, interview). As shall be addressed shortly, Rich had reasons other than a fear of mislabelling for avoiding so-called ‘underground’ labs, however it is interesting to note his specific concern over being given ‘deca’, when it is apparently so popular a drug across the user population more broadly (Bates and McVeigh 2016:6). In explaining his aversion to the drug, Rich noted “*Deca has side-effects... that I don't want... especially [given] how I reacted to that tren*” (‘Rich’, interview). This comment demonstrates Rich considers ‘deca’ to be a ‘hard’ steroid, in the same category as trenbolone-acetate, whereas Monaghan’s (2001) bodybuilders considered the drug one of the milder ‘anabolics’, to be used as a cycle’s base, along with testosterone (p.98). Rich was not alone in considering ‘deca’ to be a ‘hard’ steroid, however, with Eddie (quoted above) stating he considered ‘deca’ a “*heavy*” steroid (‘Eddie’, interview), in comparison to the testosterone and boldenone he used during his first cycle.

This shift in the position of deca in the ‘taxonomic hierarchy’ (Monaghan 2001:97) of steroids within local ethnopharmacologies is noteworthy, since nandrolone, once considered a “safe steroid” (Monaghan 2001:98; Voy 1991:19) appears to now be considered more harmful than the testosterone esters, or indeed the “horse racing steroid” (Monaghan 2001:105) ‘equipoise’ (boldenone-undecylenate). This change is particularly striking when one notes that Voy (1991) stated the nandrolone esters “probably have the fewest dangers” of any of the more common types of steroid, and indeed laments the fact that drug testing was pushing athletes from these “safer” PIEDs onto more dangerous ones (p.19), such as the ‘orals’ discussed above. In the modern taxonomic hierarchy of competitive lifters, however, an opposing opinion has emerged, in which nandrolone is seen as having significant side-effects, which combined with its months-long half-life (Voy 1991:18) makes it a “*risk*” to use.

Mariusz, for example, who similar to Rich and Eddie used both boldenone and trenbolone, two ‘hardcore’ steroids, nonetheless recounted his assessment of deca-durabolin as follows: “*I wasn't too sure on the half-life, and it had way too many side-effects than I was willing to risk*” (‘Mariusz’, interview). As someone who experimented with a drug (trenbolone-acetate) which he notes has a reputation for being “extreme”, and about which one hears “*the occasional horror story*” (‘Mariusz’, interview), it is perhaps telling that Mariusz believes ‘deca’ to have “*too many side-effects*” to “*risk*” using, suggesting the drug has a quite different reputation within the powerlifting communities from which these interviewees came⁵⁴ than in the overall population surveyed by Bates and McVeigh (2016), or the bodybuilders of Monaghan’s earlier study (2001).

Indeed, it is telling that supplier Jim, the only powerlifter to use 'Deca', who used it in his first cycle, never returned to using the drug upon completing this initial run ('Jim', interview). In fact, Jim later noted that he ceased using the drug primarily because he did not like the side-effects, and felt he could get the benefits without these by switching to boldenone ('Jim', personal correspondence 16.05.2015), a possible reason Rich holds the same opinion (see chapter four).

Perhaps most telling, however, is the fact that even image-oriented Simon, the only respondent actually using 'deca' at the time of interview, was aware of negative effects associated with the drug, and was actively taking steps to avoid the one with which he was most concerned:

SM: *I do 0.6g test and 0.4g deca [twice a week]. You do less deca than you do test because apparently you get 'deca dick'.*

LT: *Oh right. So that's erectile dysfunction then, yeah?*

SM: *Yeah, pretty much, yeah.*

('Simon Marsh', interview 19.05.2015)

The fact that 'deca' was near-unanimously decried for its negative side-effects by respondents, in contrast to Bates and McVeigh's (2016) findings that it was one of the most popular PIEDs (p.6), offers an intriguing dichotomy. Indeed, there were several ways in which respondents in the present research differed from the quantitative findings in Bates and McVeigh's (2016) longitudinal study in terms of their patterns of use (see below), perhaps suggesting some localised phenomenon whereby, for example, owing to the popularity of particular 'brands', local 'deca' might have acquired a reputation as being particularly 'dirty' (see Coomber *et al.* 2015*i*; Llewellyn and Tober 2010). This seems unlikely, however, since so many of those who criticised the drug (Simon included) conducted much of their research into PIEDs online, meaning they would be unlikely to have formed their opinions based solely on local market conditions (previous chapter).

Indeed, this note regarding the research practices of respondents might suggest a possible reason for this discrepancy between respondents in the present research, and those surveyed by Bates and McVeigh (2016): the possibility that the ethnopharmacologies of online subcultures vary from those of traditional local subcultures (see discussion of 'blast and cruise', above). In suggesting this, it is worth noting that, in addition to 'deca', Bates and McVeigh's respondents frequently (34 percent in past year) used 'sustanon' (p.6), a testosterone 'blend' popular amongst 'old school' bodybuilders, such as those surveyed by Monaghan (2001) (also Fussel 1991; Evans 1997). Simon, the only respondent to use 'deca', was similarly the only respondent to use sustanon ('Simon', interview), other than 'old school' bodybuilder Big Steve (field interview), with other users preferring either single-ester testosterone vials ('Mariusz', interview), or alternative 'custom blends' ('Martin', interview). Indeed, in interview, Mariusz strongly criticised 'blends' such as sustanon, stating "*those are just pretty much fucking stupid*", as they contain both short and long-acting esters, making precise levels in the blood difficult to calculate, rendering them impractical for serious trainers: "*I don't understand the point of them*" ('Mariusz', interview).

As noted, Mariusz paid close attention to the levels each steroid would reach in his bloodstream, and other sport-oriented users similarly stressed the importance of an awareness of half-lives ('Rich', interview; 'Martin', interview). One therefore wonders whether this shift by respondents away from using drugs such as 'deca' and 'sustanon', traditional staples of bodybuilders (Monaghan 2001; Fussel 1991; Evans 1997), reflects a growing awareness, fuelled by the rise in accessible information inherent to the growth of the internet, regarding advanced chemical and biological processes. Since the majority of users in this study who avoided these drugs intentionally were competitive, sport-focussed users, with others such as Eddie being advised by knowledgeable individuals, this trend away from drugs with "awkward" half-lives ('Mariusz', interview) would again appear to evidence a growing awareness of such factors in certain communities, as PIED use itself comes to be seen as more of a science, than a simple process of "*inject... Sunday, Wednesday, Sunday, Wednesday, every week*" ('Simon', interview), as it perhaps once was seen by 'old school' bodybuilders, and might currently be viewed by those image-oriented trainers not inclined to learn about advanced chemistry, or physiology (such as Simon).

As shall be discussed, it is clear Bates and McVeigh's (2016) respondents were primarily image-oriented, meaning the contrast in findings regarding patterns of use here likely reflects the higher degree of research conducted by competitive lifters (previous chapter), steering them away from drugs that 'hedonic' or image-focussed users might not be so informed regarding, and thus persist in using owing to their long-standing status as 'staples' in steroid cycles (Monaghan 2001; Evans 1997). 'Dedicated' users (including Eddie) appear ahead of their 'socially-using' counterparts in their understanding of chemistry and physiology (often through online research), and are therefore more likely to avoid certain drugs, based on this understanding. As well as evidencing that users can be divided into the distinct categories suggested in this research, the fact that Bates and McVeigh (2016) recorded such a high prevalence of use for both 'sustanon' and 'deca' further evidences the claim that use by non-competitive weight trainers is becoming increasingly normalised, since aside from 'old school' bodybuilders ('Big Steve', field interview), it is this group that overwhelmingly uses these drugs.

Although there could be concern that competitive users' avoidance of these 'staple' PIEDs could be fuelled by a desire to avoid 'short-term' negative effects such as depression, erectile dysfunction, or damage to natural testosterone production (ThinkSteroids.com 2016) that might be pushing them away from drugs such as 'deca' that, as Llewellyn (2011) notes, has "the lowest cardiovascular strain" (p.113) of commonly used anabolic-androgenic steroids, therefore increasing harm, it is important to note that competitive users' preferred substitute boldenone-undecylenate is similarly "safe" in this regard (Llewellyn 2011:113). This suggests that the ethnopharmacological taxonomy of sport-oriented users actually has evolved to be more-informed, and does not simply reflect changing attitudes towards harm, based on time-preference or similar factors.

This concludes the discussion of how users determine which PIEDs to use, or avoid, and in which doses and durations to use them longer-term. Clearly, there was some difference in patterns of use observed

between the apparently better-informed competitive users, and their image-focussed counterparts, with the latter often using in ways considered 'outdated', or even 'harmful' by the former, even if as Bates and McVeigh's (2016) research shows, such use encompasses a majority of PIED use in the UK (p.6). The chapter shall now therefore turn to an aspect of use that is equally important in assessing the behaviour of users from the principal categories identified in this research, with regards to how they deal with the longer-term use and effects of PIEDs: the methods employed by respondents to minimise harm through the enhancement and monitoring of general health, and supplementation to support this.

General Health Improvements; Steroid Accessory Drugs

As part of engaging in a regimen of PIED use, many sport-oriented athletes altered their general behaviour patterns and diets, to ensure they were as healthy as possible when 'on-cycle': "[I make sure] *all my vitamins are there; I'm drinking eight litres of water a day*" ('Martin', interview). Such a finding is hardly surprising, given the historic link between success in sporting and performance endeavours, and a rigorous attention to one's lifestyle (Waddington 2000; Monaghan 2001; Lupton 1997), and it might therefore be difficult in some regards to distinguish, as powerlifter Rich suggests "*what's cos of the steroids, and what's cos of just being... dedicated to the sport*" ('Rich', interview). Nonetheless, it is clear some of the health-improvement measures employed by respondents were influenced by their use of PIEDs, and it is worth considering these in the context of longer-term use. The most significant was perhaps that of abstaining from alcohol, which shall be explored in the next section. However, there were other ways in which users attempted to minimise the harms of PIED use, whether through the concomitant use of 'steroid accessory drugs', or through non-pharmaceutical, lifestyle-focussed means.

Since Martin was utilizing both Alkylated Steroids (above) which affect the liver, as well as testosterone, known to adversely affect the prostate (Mottram 2005), he sought out natural products to aid in the good function of these organs: "*I try little tricks [to] clean my liver out better... milkthistles, stuff like that. Saw palmetto... for your prostate*" ('Martin', interview). Although research into the effectiveness the latter is inconclusive (Marks *et al.* 2000; c.f. Bent *et al.* 2006), Martin, as a thorough researcher, was aware of this fact, but nonetheless used it on the off-chance it was indeed effective: "*there's not a lot of great research out there at the moment which says it does work that great, but you know, some people reckon it does... I just wanna try and keep everything working best as possible*" ('Martin', interview).

Although few other respondents utilised these natural products favoured by Martin (n=4), all sport-oriented individuals noted they used 'steroid accessory drugs' at various points, both 'on-cycle', and upon cessation, to ensure they remained in better health: "*When you're on [cycle, you] take tamoxifen at the*

same time, to keep your... oestrogen [levels] under control” (“Rich”, interview). Since oestrogen is toxic to males, and increases when one introduces exogenous steroids into one's system (Wu 1997), leading to side-effects such as gynecomastia, and depression (Maravelias *et al.* 2005), serious users understood that, when ‘on-cycle’, it was necessary to minimise these effects, by taking “*oestrogen blockers*” (“Robert”, interview). Such knowledge is found in the existing literature regarding use of steroids (Monaghan 2001; Evans 1997), suggesting those sport-oriented individuals surveyed followed similar patterns of harm mitigation to those present in older ‘hardcore’ ethnopharmacologies.

This contrasts with the experiences of many image-oriented individuals, who did not utilise these drugs, for a variety of reasons. As discussed, some image-focussed individuals were indeed knowledgeable regarding use, such as Eddie, who utilised a similar course of ‘oestrogen blockers’ to that identified by Rich (“Eddie”, interview). However, this was not observed in the majority of image-oriented users. Adam for example noted how, although his friend had supplied him with tamoxifen tablets when arranging his cycle for him, he “*didn't feel like I needed them*”, so aside from the “*maybe ten*” he used as instructed, had not taken them either during, or following his cycle (“Adam”, field diary 31.10.2016). As with Simon (previous chapter) cessation without the use of such oestrogen-antagonists was followed by a period of Adam lacking the motivation to train, although he did not make the direct connection that this was linked to his unchecked oestrogen levels, likely because he did not experience other, harsher symptoms, such as depression (“Adam”, field diary 31.10.2016).

Similarly, Josh did not utilise oestrogen blockers either when using as a teenager, or when using later, under the instruction of a personal trainer (“Josh”, interview). In the former instance, Josh noted that this non-use was due to ignorance, stating: “*there's a lot of things that obviously you take to counteract [side-effects], which I didn't know at the time, which I didn't take*” (“Josh”, interview). As shall be shown, this is not unusual for hedonic trainers. In the case of use in his late-20s, however, Josh rationalised his seeming neglect by noting how “*with the anavar being a milder steroid... it's not really needed... and obviously clenbuterol, you don't need it at all*” (“Josh”, interview). This again highlights the differences in ethnopharmacologies, since Josh's claim contradicts the advice of Mariusz, who noted how anavar should not be taken on its own, “*otherwise it's gonna start screwing with your oestrogen and everything, and turns you into a moody bitch*” (“Mariusz”, interview). However, given Josh did not appear to suffer any such effects from use, despite taking a comparatively large dose (above), this is perhaps another case of sport-oriented users being overly cautious, as discussed in relation to Eddie's post-cycle therapy regimen (last chapter).

Although not taking an oestrogen-blocker when utilizing anavar, as Mariusz suggested was necessary, Josh did use Milk Thistle, unlike a number of seemingly more cautious users, “*to flush through the kidneys*”, and thus ensure better health (“Josh”, interview). Josh's use of this product is notable, as it can be assumed that, as with the steroids themselves, Josh was advised to take it by his personal trainer⁵⁵. Although there were no other respondents in this survey who used the product on the direction of a trainer, it is perhaps significant to note that 'milk thistle' is now being sold by relatively mainstream sports nutrition suppliers

(for example MyProtein.com), as opposed to only ‘health food’ and ‘herbal remedy’ stores, suggesting there is some demand for the product amongst users of such websites, again evidencing the normalisation of facets of illicit PIED use⁵⁶.

With regards to hedonic-type users, it has been noted that they frequently did not utilise post-cycle therapy drugs, perhaps the most important of the steroid accessory drugs. Big Steve noted this in his observations of the physiques of these individuals (field interview; above), and physiotherapist Robert similarly became aware that clients were not “*coming off properly*”, often disappearing for months at a time upon cessation of their cycles (‘Robert’, interview). Although such third-party observations cannot establish whether other SADs are utilised, Pete nonetheless was able to give some insight into his peer group’s approach to such measures: “*they all got...bitch-tits... [so] 'Mike' found someone to give him drugs that will sort it out for him*” (‘Pete’, interview).

Pete’s peer group are here acknowledged as taking drugs to off-set the negative effects of their steroid cycles, but only *after* having developed symptoms. Whilst the powerlifters used accessory drugs such as oestrogen-antagonists to mitigate symptoms arising in the first place, hedonic users sought a solution only once the problem had occurred. As Pete notes, his friends “*all*” had this problem, yet it was only once ‘Mike’ developed gynecomastia that he sought treatment, eschewing preventative action prior to this point, based on observation of his friends. This again relates back to suggestions that hedonic users operate with higher time-preference to competitive users, planning only for short-term effects, dealing with problems only as they arise, an assertion that shall be evidenced strongly below. For now, it is worth considering further ways in which users sought to off-set harms, and improve general health, when using PIEDs.

As noted already, there was a stark divide between competitive users, and others, in their utilisation of post-cycle therapy drugs, with the clearest division concerning use of the drug human chorionic gonadotropin (HCG). As Evans (1997) describes, HCG is utilised “at the end of a steroid cycle to kick-start suppressed endogenous testosterone production in an attempt to reduce withdrawal symptoms” (Evans 1997:57). Whilst the medical literature regarding this drug as a treatment for negative results of steroid use tends to focus on treatment of azoospermia, as opposed to rejuvenating natural testosterone (Menon 2003; Matsumoto 1994), the belief in HCG’s ability to be utilised in this manner is prevalent across sport-oriented subcultures, as former UFC contender Chael Sonnen noted regarding his own use: “Any doctor will tell you, if you go on testosterone, you’ve gotta then go on HCG to turn it [endogenous testosterone] back on” (Chael Sonnen on Rogan 2016i 1:02:35; also Sonnen 2016).

This belief HCG could help an individual’s natural testosterone levels recover following a cycle was common amongst sport-oriented users, with every powerlifter surveyed having utilised the drug. As Mariusz described it, the drug, if utilised correctly, was extremely valuable in aiding recovery, and mitigating potential side-effects caused by the ‘shut down’ steroid use typically triggers in the testes: “[HCG] works

perfectly. No problems from the cycles, or anything, and your balls don't shrink or anything, which is great... it seems to really help with the mood as well... by not letting your HATP shut down completely [you] keep like a base level of normality in you so you don't swing about" ('Mariusz', interview).

Mariusz's analysis is particularly interesting, since he did not use HCG during his first cycle, and noted how, despite using carefully enough that he "*didn't get side-effects*", he nonetheless "*lost [a] significant amount of what I put on*" upon cessation ('Mariusz', interview). Learning from this, and adding HCG to future cycles, Mariusz noted he had no problems of this type again, and consequently was able to continue training, and making progress, even following cessation of cycles up to "*7 months*" in length ('Mariusz', interview). Although as noted previously Eddie did not utilise HCG, yet suffered no ill effects from a tamoxifen-only PCT ('Eddie', interview), it is nonetheless clear that the drug was particularly useful in bridging the transitional period between cessation of exogenous testosterone use, and endogenous production restarting, although other drugs such as ostarine could be utilised for this same purpose ('Martin', interview).

A further reason HCG is worth discussing is that it was not utilised by a single image-oriented user in the course of this study, even including otherwise well-informed individuals, such as former Marine Eddie. As such, given that Evans' (1997) survey of bodybuilders found 49% of respondents had used the drug, compared to only 17% in Bates and McVeigh's (2016) longitudinal survey (p.6), this could well evidence the growth of this less-informed, image-oriented culture of use in the intervening years, again demonstrating the increasing normalisation of PIEDs outside of sport-focussed environments, as well as the identified shifts in patterns of use as a consequence of this demographic change.

In assessing the impact of changing approaches to the mitigation of harm in recent years, especially as relate to the increasing shift towards a hedonistically-oriented pattern of use, however, it appears one of the greatest differences between user groups might be observed in the use of alcohol, and other drugs, when on-cycle, and it is to this facet of longer-term use of PIEDs that the chapter shall therefore turn.

Abstaining from Alcohol and "Club Drugs"

One notable way users sought to improve general health when on-cycle was abstaining from alcohol, or reducing intake, a phenomenon common within 'hardcore' PIED-using subcultures for some time (Lupton 1997; Monaghan 2001; Coomber 1993;2013). As Lupton (1997) notes, there is some degree of an "exaltation of sobriety" (p.144) observed within groups that treat the body as an aesthetic accomplishment, such as bodybuilders, and a reluctance to participate in actions that might be seen to pollute the purity of one's created masterpiece, negatively impacting upon the body's health, is therefore unsurprising (see also Monaghan 2001). Likewise, in the case of competitive sportsmen, it is clear why athletes might avoid any

drugs that could conceivably negatively impact upon their training or performance, given that in elite sporting events, a single percentage point difference in performance can mean the difference between first, and last place (Moore 2012; Coomber 2013; Waddington 2000; Cooper 2012). Although such individuals might “relax and enjoy ‘normal’ activities” (Monaghan 2001:64) at times, these periods are the exception, and indeed individuals who live an hedonic life of alcohol consumption, and other potentially performance-harming activities, yet succeed in competitive sporting arenas, are usually faced either with criticism, or some degree of respect for performing sufficiently well whilst so ‘handicapped’ (for example Rogan 2015*ii*).

Both of these elements were apparent in the present research, and many users chose not to drink alcohol owing to the negative impact on their training, even prior to commencing PIED use (‘Rich’, interview). This section shall however seek to differentiate between abstention linked to improving health or mitigating harm from PIED use, from abstention symptomatic of a fear alcohol or drugs would negatively impact upon one’s achievements in sport or bodily achievement, in order to narrow the focus to motivations specific to PIED use, the focus of this research.

Martin, for instance, stated that one of his primary influences in ceasing to use alcohol was that, when on steroids, “*the liver has to cope with so much, I've stopped drinking, I don't drink any more*” (‘Martin’, interview). As noted, whilst a number of users intentionally avoided oral steroids, Martin felt the positive benefits of these outweighed the risks, providing one was careful in their approach to use. In addition to taking milk thistle, and other preventative measures, Martin was aware that perhaps the most significant difference one could make when looking to minimise harm to the liver was to cease consuming alcohol: “*I know that when taking orals, and obviously alcohol, it's so hepatotoxic cos your liver's got to cope with so much crap, so I just thought 'it's not worth the risk'... so I just stopped drinking. It was easier that way*” (‘Martin’, interview). As noted above, Martin was a fairly health-conscious individual, so such a decision seemed to him fairly natural. Reflecting upon his cessation of alcohol use, Martin commented “*not that I drank anyway, I drank socially*” (‘Martin’, interview). This abstention thus represents a small change, similar to the efforts detailed above, made by Martin to clean up his lifestyle. Nonetheless, the decision to cease using alcohol was a commonly observed one, and numerous respondents made comments reflecting similar rationalisations to Martin’s throughout the course of research.

Mariusz, for example, explained how he “*completely cut out everything. I stopped drinking, I stopped doing drugs completely. I went cold turkey*” (‘Mariusz’, interview). Although this decision was in part influenced by factors other than the polypharmic effects drug and alcohol use could potentially have with PIEDs, Mariusz nonetheless listed these synergistic effects as being of primary concern to him: “[I did it] so I knew that I'm not risking doing something stupid, for example like 'hey, I'm on tren, I'm gonna go and drink a bottle of vodka', you know?” (‘Mariusz’, interview). Mariusz’s experience departs from Martin’s in one significant way, in that Mariusz confessed to having been involved in illicit drugs and alcohol prior to commencing his wrestling training, and PIED use: “*previous to training I was partying a lot. I've pretty much done everything*” (‘Mariusz’, interview).

The next chapter shall discuss the 'recreational' drug use of individuals who use PIEDs in more detail, however it is here interesting to note how Mariusz, formerly a 'party drug' user, made the choice to cease use prior to going on PIEDs, out of an awareness of the harms this could cause⁵⁷. As noted previously, as a wrestler, Mariusz was exposed to a number of individuals who used painkillers to help them perform for longer periods without needing to rest, and repair. Seeing such practices as "*a very slippery slope*" ('Mariusz', interview), owing to the deaths associated with painkiller abuse in wrestling (Bell 2015; Bell 2008*i*; Assael and Mooneyham 2004), Mariusz further declined to participate in this drug use, beyond using "painkiller gel" [ibuprofen] ('Mariusz', interview), in addition to avoiding 'party' drugs. Reflecting on the harms of using drugs and alcohol when on steroids, Mariusz explained how: "*I know some people who are on [steroids], they go out and get drunk and do fucking coke... you're just asking for a heart attack, basically*" ('Mariusz', interview).

Once more, the split between 'competitive' and 'hedonic' users is here identified, with Mariusz noting how amongst competitive wrestlers, opiate painkillers (and cannabis; next chapter) are the only commonly-utilised illicit drugs (generally in the form of 'diverted' prescriptions ('Mariusz', interview; Bell 2015)) aside from PIEDs, whilst hedonic individuals who train for appearance, whether for intimidation, or sexual competitiveness, are more likely to abuse alcohol, and drugs such as cocaine, whilst on PIEDs ('Mariusz', interview). It is here worth noting that Mariusz's analysis of hedonic-type users appears accurate: such users did not appear to abstain from alcohol, or harder drugs, and as with health concerns more generally, individuals who used PIEDs as part of the "*Saturday night rules*" ('Stephen', interview) culture, did not restrict their intake of other substances merely for the sake of their health whilst on-cycle. As Pete phrased it: "[We're] just all about the banter...drinking beer..." ('Pete', interview), and when partying are happy to use "*MDMA, cocaine, anything. Just to have a good time*" ('Pete', interview). Whilst in stark contrast to Martin's clean lifestyle, and indeed even Mariusz's reasoned decision to not risk his health by continuing such practices whilst on PIEDs, this revelation is perhaps not surprising, given the attitudes of this group more generally, which in many ways parallel youth dance cultures (see Measham *et al.* 2001) more closely than 'hardcore' PIED-using subcultures, and the levels of alcohol and other drug use identified by Bates and McVeigh (2016; next chapter).

Amongst non-hedonic image-focussed users, attitudes towards alcohol and drug use were somewhat moderated, and more in-line with competitive users. This would again seem to suggest that non-hedonic image-focussed users in the present day have acquired much of the ethnopharmacologies and habits of 'hardcore', competitive users from two decades ago (above). Indeed, having moved from being a member of a hedonically-oriented group, to a more generally image-focussed user (chapter four), Josh noted when asked whether he drank alcohol how his approach had altered over the years:

JP: *I don't [drink], no... but at the time [of the first cycle] I did... Being young, obviously you go out, you drink... and you're still taking these substances... but normally alcohol, as well, affects what you've taken.*

Being in a serious training environment, after parting from his hedonically-using friends following several years training together, Josh came to be more informed regarding ‘correct’ usage, and why other users abstained from consuming alcohol (‘Josh’, interview). In discussing ‘normalisation’, it is interesting to consider whether such a pattern might maintain itself for the user population more generally, and anecdotally, it is worth noting that the “*lad culture*” of drinking and partying whilst simultaneously training on steroids (‘Pete’, interview; Martin 2014), contains predominantly individuals under the age of 30, suggesting those who do not ‘grow out of’ the ‘workout culture’ more broadly (see Olesker 2015) nonetheless end up tempering such habits. The extent to which this is due to the simple process of greater responsibility accruing with age, making reckless behaviour less desirable, or is due to a process of evolution of learning, is questionable⁵⁸, however the fact that outside of the “*Saturday night rules*” (‘Stephen’, interview) subculture there was a general taboo against the consumption of alcohol when on-cycle seems to indicate at least some normalisation of ethnopharmacology across groups.

Abstaining from alcohol was not solely oriented towards harm-reduction, however, at least in a conventional, health-oriented sense. Simon, for example, abstained from alcohol not because he worried about his health, but owing to fears that the synergistic effect between steroids and alcohol would make him more aggressive, potentially causing him to “*get angry and start smashing shit up*” (‘Simon’, interview). The phenomenon of “*roid rage*”, and Simon’s experiences of this, shall be discussed in detail next chapter, however it is interesting to note that users had a variety of reasons for abstaining from alcohol, and indeed, given Pete and his friends’ stated desire to always be “*the biggest alpha male*” in the club (‘Pete’, interview), one wonders whether such individuals might abuse alcohol for the precise reason Simon abstains from it (see next chapter).

There is a wealth of literature exploring the motivations individuals have for using alcohol in the context of the population more generally (for example Miller *et al.* 2006; Scholes-Balog *et al.* 2016; MacLean 2016), and PIED users are naturally susceptible to many of these same personal factors. As such, this chapter shall not further discuss the phenomenon of this stark divide in user approach to alcohol consumption. However, the trend towards abstention from groups outside of “*lad culture*” shows once more that some degree of awareness of risks and harms is prevalent throughout user subcultures, with a diffusion of knowledge having seemingly occurred from older ‘hardcore’, to the more ‘casual’ users (such as Simon and Josh) of the present day, further indicating both a ‘cultural transmission’ (Shaw and McKay 1942), and establishing a normative ‘discipline’ of PIED use more generally, from which some hedonic users are observed to deviate (previous chapter). Clearly, these differing groups had strong, opposing norms in their approach to alcohol usage, and indeed these patterns seem to be normalised within each group, with an individual unlikely to be accepted in the “*lad culture*” if they did not engage in social alcohol consumption (Martin 2014), in the same manner as competitive bodybuilders might criticise an alcohol abuser (Monaghan 2001).

The practical effects of these alternate approaches to long-term use of PIEDs shall be discussed shortly, in the context of negative effects experienced when ‘on-cycle’. However, it is first necessary to explore a final preventative method, which was not generally pursued by individuals from any culture of use, suggesting a possible route through which harm-minimisation policies could be pursued: the approach taken by the various user subcultures to the seeking of professional medical advice.

Seeking Professional Medical Advice

As discussed, competitive users were often highly cautious in their approach to use, conducting extensive research, and having systems to ensure they used in a safe manner once they commenced cycle. It is therefore curious that very few individuals surveyed had spoken to a doctor, or other medical professional regarding use, especially since such a protocol is advised in handbooks of steroid use (Duchaine 1989:25), and popular texts relating to use (Llewellyn 2011).

Those who consulted a doctor were notable in their reasons for so doing, and indeed their responses to the outcomes of these consultations. Rose was the only participant to visit a GP regarding PIED use prior to actually commencing use, and her perspective is valuable in extrapolating why there was so little engagement with physicians, even amongst intelligent and informed users. As noted previously, Rose suffers from a debilitating medical condition, and went to her GP asking to be prescribed human growth hormone, which some studies had suggested could help with her condition (*‘Rose’, interview*). This is significant, because Rose was refused this request, which led to her buying illicit HGH, imported from China. In this respect, it is clear Rose saw her GP as merely an obstacle to good health (Monaghan 1999), and did not trust their judgement, or medical expertise: *“I figured someone who was an expert would actually be... interested in the fact that something that hasn’t occurred to [them] before... was being done and may help... but no, it didn’t... conform with their view”, “the basic opinion of the medical community is that you should just be fine to sit there and be in pain”* (*‘Rose’, interview*).

Rose was angry at the dismissal of her request to be prescribed a drug that, as she notes, is already prescribed *“for... ‘anti-ageing’ purposes... but if you need it at a younger age for a legitimate condition, they won’t consider it”* (*‘Rose’, interview*), and felt her doctor did not have her best interests at heart. It is clear that having read academic papers on the viability of HGH as a treatment, Rose felt she was better-informed on the subject than a GP with a broader base of medical knowledge, and so felt let down when they would not even consider this treatment as an option, instead simply prescribing her opioid painkillers, which as she notes, was no treatment at all (*‘Rose’, interview*). Doctors are therefore seen here as ‘gatekeepers’ to good health, who in effect act as antagonists to individuals seeking to pursue wellness.

This correlates with the views of bodybuilders interviewed by Monaghan in his *'Challenging Medicine?'* (1999), who noted that doctors often knew less about PIEDs than those who used them, and fell victim to the same 'moral panics' as the general populace, thus rendering them antagonists to the honest PIED-using bodybuilder, whom they would sooner condemn than help. This view that doctors are not interested in helping PIED users was highlighted by Johnny, whose experiences asking his doctor to prescribe him testosterone, to deal with his perceived deficient levels, were described in chapter four. Johnny was angry that the doctor refused to tell him the results of his hormone test, merely stating it was within a 'normal' range. As Johnny noted with frustration, this was not overly helpful, given "*It's a massive range*", and the lower end of 'normal', at his age and level of physical activity, was certainly far below where he felt he should be: "*I want to see to see the numbers, cos it could be [anything]... 300 to 1200 [ng/dL] is the average range... It's a massive range*" ('Johnny', interview).

Although Johnny had not gone on to take 'underground' testosterone, he was seriously considering this option, because he felt the doctor had not taken his concerns seriously, and was denying his right to "*a better level of life*" ('Johnny', interview). Ultimately, Johnny's decision to not use was heavily influenced by the fact that he could not secure a pharmaceutical-grade source, and did not trust the cleanliness of 'underground labs' ('Johnny', interview). Had Johnny been less afraid of infection, one wonders whether his doctor, in refusing to disclose the test results, and allowing Johnny to decide whether or not he needed treatment, could have put Johnny at risk of using in a harmful manner, causing him to self-medicate without the relevant information, as he so nearly did. Whilst Johnny was still free to visit a private medical practice for a second opinion, it is worth noting that, as a result of socialised medicine being so thoroughly ingrained as a British institution (Harrison and Ahmad 2000) many might not consider private practice as an alternative, and will consider their non-illicit options closed upon a refusal from their NHS GP. A refusal to disclose test results to patients might therefore be considered a restriction of medical autonomy (Harrison and Ahmad 2000), ultimately undermining trust in the public health system, and potentially leading to negative outcomes, with individuals driven to rely on advice of suppliers in gyms, as opposed to medical professionals (Monaghan 1999; Voy 1991).

An additional element of distrust arose from the way medical information is recorded and shared, with users uncomfortable about having their medical records permanently state they had used illicit drugs. Jim told me of a mutual acquaintance who had informed his doctor in what he believed to be confidence that he was using testosterone, only to discover on a subsequent hospital visit that this information was stored in his medical records ('Jim', field diary 03.06.2015). Since certain employers require access to medical records (e.g. military), the individual in question felt this was no small matter, and felt his confidence had been betrayed. He therefore cautioned Jim against ever informing his doctor of his use, a warning Jim apparently passed to another mutual friend, Rich, who stated of his own refusal to see a doctor when suffering a negative reaction to steroids: "*I didn't want to... have that [I was using PIEDs] on my medical records permanently*" ('Rich', field diary 25.09.2015). Rich's story shall be discussed in detail in the final

section of this chapter, as it is highly significant, and a powerful warning of the harms that distrust in the medical community might potentially cause. However, at this stage it is simply used to illustrate that distrust of doctors was widespread, even amongst informed, intelligent users.

Indeed, aside from Eddie, who as noted had a close friend in the medical profession whom he trusted for advice regarding PIEDs ('Eddie', interview), it seems the only (using) respondent to have any faith in the medical community was powerlifter Martin, who noted a doctor could provide important information for assessing how one's body was handling the drugs, which might not otherwise be accessible: "*you might be able to feel if your blood pressure's high... you know... obvious things. But when you're talking about your... HPA fucking axis and all that... LH and cholesterol... I ain't got a clue what's going on there; you don't know*" ('Martin', interview).

Although informing me that he had not yet consulted a doctor regarding his PIED use, Martin nonetheless had a timetable in place: "*I am planning to go and have [a health check] done... just to see where everything is. Because I was planning on doing, like, three or four [cycles], then getting one done. But I think I'm gonna do two, then get one done, and see where I go from there*" ('Martin', interview). Although waiting for two cycles before seeing a doctor might still be considered somewhat risky behaviour by a layperson, it is notable that Martin was the only respondent from any category of user who was intending to pro-actively seek a check-up with his GP, as opposed to simply utilizing medical services in case of emergency only. As with prior explorations of Martin's regimented behaviour, it is clear that his cautious approach to health influenced his decision here as well: "*you could possibly cause a lot of problems in three or four [cycles], if you done it wrong, or abused it... if anything is wrong I'd rather get it early than late*" ('Martin', interview).

As a new father, and older in his starting age (36) than any other PIED user surveyed, there are several factors that might have convinced Martin to take a more cautious approach to health check-ups, and additionally, it is worth noting that Martin had already been forced to visit a doctor regarding his use, following a bad experience injecting, as shall be discussed below. Further, Martin was one of the few individuals I spoke to who was generally open with everyone, including family members, about his use: "*they know everything, they know what I take, when I take it, so if... heaven forbid I hit a nerve, or... something, then they know, when they ring the ambulance they can turn around and go 'he's on this', so they know straight away what's wrong with me*" ('Martin', interview). As shall be discussed next chapter, there is still a certain social stigma attached to steroid use that left a number of respondents reluctant to discuss their use with family members, which might extend to medical professionals, who as noted are often viewed in an antagonistic manner (Monaghan 1999).

Although other outreach services, such as needle and syringe programs (NSPs), are available for the dissemination of advice regarding safe practice, few individuals utilised these services, for a number of reasons. As discussed last chapter, Simon did not visit his local NSP, in a Boots chemist, out of fear of being recognised when collecting needles ('Simon', interview), and it can be assumed that many individuals will

have similar fears. Josh, for instance, when using as a teenager acquired everything, including needles, through his friends ('Josh', interview), and Pete similarly noted that, amongst his friends, "*they all supply each other*", whether with drugs, or with needles and syringes, acquired online ('Pete', interview).

Indeed, even amongst those who utilised such services, there was an acknowledgement of the stigma attached to visiting such establishments. Rich, for instance, noted how he would supply other gym-members with needles, despite informing staff at exchanges they were for personal use:

RL: *I've got some guys like needles and stuff, cos I went to the needle exchange and I would pick up... as many as they would let me get away with, basically. So if I could get a hundred, I'll get a hundred.*

LT: *Yeah. So... you would intentionally pick up needles and things for other people?*

RL: *Yeah... well, not everyone wants to go there, do they? You know, people don't want to be seen there, or it's inconvenient or whatever... and if I went in there I would pick needles up for whoever wanted them.*

('Richard Locke', interview 02.06.2015)

It would seem, therefore, that in spite of the frequency with which preventative health services purport to deal with steroid users (Kimergård and McVeigh 2014), there was nonetheless a strong aversion from all types of user to accessing such services, and this was generally attributable to either distrust, or a desire to avoid negative stigma associated with the use of such services (Simmonds and Coomber 2009). Although this revelation might appear relatively harmless, given the capacity for individuals to learn safe injection protocols through videos online ('Simon', interview), it is worth noting that, in conjunction with the general distrust of medical services, this led to a scenario in which many individuals did not utilise the services of medical or outreach professionals even when affected by significant negative health events, as shall be detailed below.

Clearly, there is some need for policy to seek to minimise associations between institutions intended to help IDUs, and these negative perceptions (Simmonds and Coomber 2009). This might be achieved through a drive to encourage personal trainers and gym staff to operate as a form of 'outreach worker', since it is individuals who train in commercial-type gyms who are believed to be most at-risk.

This concludes the chapter's exploration of preventative measures employed to avoid harms associated with PIED use, and leads into the concomitant discussion of negative events experienced by respondents in this study, evidencing the need for the employment of such methods, and highlighting further the need to address knowledge (and trust) shortfalls amongst users. This discussion shall round out the remainder of the chapter.

Negative Effects of PIEDs.

In discussing the longer-term use of PIEDs, it is essential to consider negative effects experienced by users, both 'on-cycle' and 'off'. As noted previously, a number of users experienced negative effects, such as insomnia ('Rich', interview), excessive sweating ('Mariusz', interview), water retention ('Josh', interview), back acne ('Eddie', interview), and depression ('Simon', interview), in line with the effects described in the literature (Monaghan 2001; Kuipers 1998; Mottram 2005; Llewellyn 2011). Whilst such experiences are relevant to explorations of longer-term use, a repetition of material that is well-documented elsewhere will not serve to inform the questions posed by this thesis, and this section shall therefore review the negative effects of PIEDs in a context beyond the commonly experienced, and thus generally-anticipated effects.

The discussion here shall therefore begin by addressing harms caused by the method of administering PIEDs, especially via injection, and shall subsequently discuss the purported phenomenon of 'dirty batches', or unsterile product, including an analysis of the veracity of claims relating to the prevalence of this phenomenon. This section shall then turn to a discussion of the phenomenon of individuals disregarding significant health events, and the relevance this has in assessing the extent to which certain cultures of use are becoming normalised.

Adverse Effects from Administering Product; 'Dodgy Batches'

The means of delivery for the most commonly-used PIEDs is intra-muscular injection (Bates and McVeigh 2016:6; Mottram 2005), and this naturally presents the opportunity for negative events to occur, both during and as a consequence of administration. Research into habits of injecting drug users (IDUs) has long noted trends signifying potential harm to users (Morrison *et al.* 1997; Darke *et al.* 2001; Kimergård and McVeigh 2014), and policies such as NSP have been introduced specifically to reduce such harms (Berridge 1996; Torre 2009). Indeed, with the growing popularity of anabolic-androgenic steroids, many NSPs now report PIED users form their principal clients (Kimergård and McVeigh 2014; Simmonds and Coomber 2009), suggesting the potential for a public health risk surrounding such use.

Bates and McVeigh (2016) reported that some 31 percent of male PIED-users had experienced pain at an injection site in the course of use (p.10), 16 percent experienced 'swelling, redness or heat at injection site', and 2.1 percent had experienced an 'abscess, sore or open wound' (p.10). Given Bates and McVeigh's survey collated the experiences of some 561 male IDUs (2016:10), these figures currently serve as one of the best indicators of harms experienced by PIED-using population more broadly, suggesting that problems incurred owing to the injection process are prevalent across this population. The present research does not demur from these findings, with a large minority of respondents experiencing some negative effects during,

or as a result of injecting PIEDs. The qualitative experiences of respondents are therefore worth exploring further, to determine in more detail the precise nature of these harms, and the reactions of users to them.

There was an awareness from many respondents that injecting posed potential harm, and a number of users described their understanding of such hazards: “*obviously you can inject in a vein... at the end of the day, it's frightening experiences if you manage to hit a vein, or anything like that*” (‘Josh’, interview). As with research into other drug-using populations, this subcultural awareness of potential harms is significant, and could to some extent indicate the success of public policy campaigns targeted at such populations (ACMD 2010). In Josh’s case, unfortunately, as a young man who simply did “*what the other lads were telling me to do*”, this lesson was not learned until after he had experienced such a scenario first-hand: “*I've hit [a vein] before... and it does affect your nervous system as well, obviously, cos you've injected in the vein. It's... quite a shock to the system. And obviously for a little period of time after that... your body's... still trying to repair... so you're very sore in that area*” (‘Josh’, interview).

Indeed, Josh noted that a significant reason for his ceasing use of injectable steroids, and swapping to ‘orals’ only, was his negative experience injecting into a vein (‘Josh’, interview). Although the extent to which this could be considered to reduce harm is questionable, owing to the potential hepatotoxicity of orally-active compounds (above), Josh’s approach to minimizing a specific harm made pertinent to him through experience nonetheless demonstrates the type of behavioural alteration based on feedback addressed last chapter, and demonstrates how in the case of severe harm, even image-oriented individuals who are otherwise ill-informed were capable of such rational assessment, and adaptation.

Gym user Simon similarly experienced harm from injecting, altering his behaviour as a consequence. In Simon’s case, however, the harm was not perceived to be caused by the injection itself, but rather his reaction to the compound injected: “*I had a really bad allergic reaction to it, come up in hives*” (‘Simon’, interview). Whilst Simon did not believe this reaction to have been due to the actual injection process, however, he nonetheless found himself in a position where, on resuming use: “*I tried to inject myself and I couldn't do it, even though I'd done it before. I got the needle halfway in, and I ended up pulling it out cos it hurt me too much*” (‘Simon’, interview).

The phenomenon of a psychological barrier preventing an individual from undertaking (or repeating) an action that is perceived, consciously or not, as causing the body harm, has been well documented in both psychology, and sports science literature (Wise 2009; Semmler and Enoka 2000; Komi 2003), and it is likely Josh also suffered such an effect as a result of his bad injecting experience, noting how it “*affect[ed] his nervous system*”, which led him to him feeling unwell, and uneasy, for “*some time*” after (‘Josh’, interview). Whilst in Josh’s case, however, this led (in part) to his ceasing to use injectable PIEDs, Simon’s response was markedly different. Rather than cease injecting, Simon instead found a method of delivery that allowed him to take the drugs without this negative reaction to administering them, allowing him to continue his steroid ‘cycle’ as planned: “*getting someone else to [inject you] is fucking brilliant. You do it yourself and your*

hand's shaking, you get so nervous and scared about getting it in the right place... without wobbling it around inside you. But if someone else is doing it, you just turn around, don't look, lean against the wall, and it's straight in, straight out ('Simon', interview).

Perhaps the key difference in these responses is the weighing of risk by the parties involved (see Estrin *et al.* 2008:127-131). Josh, in hitting a vein, identified a hazard he realised could be repeated, which was sufficient to dissuade him from injecting again, in spite of having injected himself dozens of times previously. Simon, meanwhile, assumed his reaction was due to a "*dodgy batch*" ('Simon', interview), as opposed to a sterilisation issue, or similar problem connected to the actual injecting procedure. He therefore made the choice to switch suppliers, and use a different brand of steroid, and so did not take the act of injecting to be any more harmful than he had prior to suffering his negative experience. As shall be shown, this type of minimal response to an increased awareness of harm was far more prevalent amongst respondents than Josh's more cautious approach.

Negative experiences injecting were not limited solely to image-focussed, or casual users, and indeed even the most knowledgeable, and cautious respondents experienced side-effects during, or following, the injection process. Powerlifter Martin, whose extensive reading and careful preparation were described last chapter, recounted his experience of acquiring an infection through injecting steroids: "*I injected into my [glute]... and I got cellulitis, which is an infection under the skin... red lump... solid, and hot... I went to the doctor... on the third day, it [had spread] like halfway down my leg... so they gave me flucloxacillin, cleared that up*" ('Martin', interview).

Of note here is that Martin is neither a casual user, as evidenced by the degree of research he conducted prior to use, nor a careless, risk-taking young man, as Josh and Simon were at the time of use, which one might assume to be the case for the majority of individuals who have negative experiences when injecting (only 6.8 percent of Bates and McVeigh's respondents began using PIEDs in the same age bracket or at a later stage than Martin (2016:5)). Indeed, Martin's case highlights that, regardless of attempts to minimise harms, negative events are something to which IDUs will be exposed in using black-market products, irrespective of how responsible they are in the actual administration of those drugs: "[for] *my first injection, I'd been shown how to inject, everything. The nurse was there – my girlfriend's mum – she watched it and she said it was perfect, there was nothing I didn't [do]: I swabbed it, she said it can't come from the needle, or my hands, everything[had] been sterilised*" ('Martin', interview).

Having learnt to inject from a trained medical professional, it was clear to Martin that the fault lay with the product, and not himself. As with Simon, Martin identified the suspected cause of the problem as a "*dirty vial*" ('Martin', interview), and noted how, in response, he had subsequently "*gone [on to] pharmaceutical-grade stuff*" ('Martin', interview), which he knew to be more trustworthy, in order to avoid repeating such an experience. Although initially happy to use 'underground' (Llewellyn and Tober 2010; Coomber *et al.* 2015*i*) product, Martin stated the negative experience injecting had taught him not to trust such mixtures,

and noted how “[‘underground’ product] could just be made up in someone’s kitchen with his cat walking around for all I know, licking the bowl, you know? That’s dodgy shit” (‘Martin’, interview). As fellow powerlifter Rich’s interview confirmed, this belief that there was a lot of ‘dodgy’ product circulating in local markets was not uncommon.

Rich did not suffer immediate problems with painful injections or infection, however he did note that the ‘underground’ product he began using initially, prior to Jim’s beginning ‘brewing’ (Llewellyn and Tober 2010), gave him side-effects: “I got really itchy on [‘Test400’]… I started just taking anti-histamines every day with it, and that helped a bit… so I don’t know, maybe I was allergic to it… because it was ‘bathtub brew’, so there was something dodgy in it” (‘Rich’, interview).

Rich voiced a similar concern to that posited by Simon, Josh, and Martin regarding the cleanliness of ‘underground’ PIEDs, noting how he suspected the purity of the lab’s product might have been responsible for his adverse reaction. Indeed, Rich noted that he only experienced this side-effect when using a specific lab’s product (‘GB Pharma Test400’), and not when using other forms of injectable testosterone (‘Rich’, interview), suggesting this theory of ‘dirty batches’ may have some merit: “GB Pharma… apparently that’s shit… what I’ve got online just from typing in lab names, a lot of them it’s… ‘bathtub brew’, is what they call it… where yeah, it’s just where someone’s brewed it up in their bathtub, basically. It’s not the pharma stuff, it’s not good stuff” (‘Rich’, interview)⁵⁹.

As a result of his negative experience, Rich notes he took anti-histamines to manage the symptoms, and simultaneously researched labs, looking for the consensus reputation of the product he was using. Similar to Simon and Martin, Rich made the decision to switch ‘labs’ after learning of the negative reputation of his own, and subsequently only bought product that was either “Chinese lab stuff”, or that was ‘brewed’ personally by Jim, noting he had no intention of ever going back to product that was not “made by a chemist” (‘Rich’, interview).

Interestingly, in spite of his generally cautious approach to use (previous chapter), Rich nonetheless finished the vials he had purchased, regardless of the negative reaction he experienced, choosing simply to manage the mild symptoms the product produced, rather than come off, and wait until he could access a ‘cleaner’ product. This suggests that, in spite of his stated distrust of ‘underground’ products, Rich felt the risks of continuing use were not sufficiently severe to justify throwing out the vials he had already purchased, and one therefore wonders whether he might simply be exaggerating the harms of ‘underground’ products in interview to sound more informed, or more cautious than he in fact is in his personal actions (a phenomenon documented by Coomber (1997*i*) in relation to cocaine suppliers). Given cessation of testosterone causes negative effects itself (above), however, it is possible Rich weighed the harms to his training of this, against the likely long-term harms of remaining on ‘dirty’ product until he could access ‘cleaner’ drugs, and came down in favour of continued use. Regardless, it is clear there was some question amongst users as to the sterility of product sold in the local area, with three users who identified

possible cleanliness issues ultimately changing 'labs' in response to negative reactions.

Individuals who had not experienced 'dirty' product similarly commented on the potential for such harm, and it is clear this was a common belief, spanning both competitive, and image-focussed users. Josh, for example, long after ceasing use of injectable PIEDs (above), noted how, based upon further research he had conducted into steroids (previous chapter), he was aware that: "*a lot of people are not legitimate, and they don't put an actual... pharmaceutical-grade steroid into the bottles. They're filling them with different type[s] of oils and stuff, so in reality you don't know what you're putting in your body*" ('Josh', interview). Similarly, Johnny suggested one of the major factors keeping him from using testosterone was a distrust of 'underground' product, noting he would happily begin using if he could get the drug through a pharmacy, or on prescription ('Johnny', interview; field diary 08.06.2015).

In the context of these claims of "dirty vials", it is worth noting some of the literature relating to similar phenomena, in the case of other illicit drugs. Coomber (1997*i*;1997*ii*;2006*i*;2006*ii*), for instance, notes that many of the perceived harms relating to recreational drugs are often greatly exaggerated, or indeed outright myths. In his research interviewing drug suppliers in prisons, Coomber (1997*i*) found there was much talk of adulteration of drugs, and 'dirty' products, but suppliers who mentioned that others were involved in such practices had not themselves actually participated in any such processes, suggesting the actual prevalence of such behaviour was far lower than respondents perceived, or stated (Coomber 1997*i*). Indeed, multiple surveys of heroin and cocaine suppliers, and quantitative chemical studies of these drugs, have found that most suggestions they are either 'unclean' or 'adulterated' with harmful products are in fact unfounded (Coomber 1997*ii*; Coomber and Maher 2006; Cole *et al.* 2012), and given the degree to which 'pusher myths' (Coomber 2006*i*) surrounding recreational drugs are also perceived as affecting performance-enhancing drugs (Coomber 2013; cf. Voy 1991), it seems probable that similar (false) equivalences might occur with regards to alteration of PIEDs. Such evidence could therefore suggest that the fear of a widespread phenomenon of 'dirty' PIEDs could in fact be a moral panic, and this could suggest the above responses might require additional context, in order to assess the veracity of claims regarding the phenomenon of "*bathtub brew*" more conclusively.

Although Rich stated in interview that, in his discussions with Jim, after the latter became involved in the creation and sale of product, Jim had confirmed what Rich had read on the internet about other local market suppliers, it is important to note that criticisms of these brands made by Jim to myself never explicitly questioned their cleanliness, as Rich suggests. In the context of talking about claims relating to the uncleanliness of certain products he had read online, Rich suggested that Jim confirmed these rumours, noting "*Jim says that [lab is] shit [as well]*" ('Rich', interview). Rich's equating this criticism, if *verbatim*, with meaning the product is 'unclean', may however be a *non-sequitur*, based on his own pre-conceived beliefs, drawn from his reading online. As Coomber (1997*i*) notes, recreational drug suppliers frequently were guilty of "mixing knowledge... with myths" (p.300) when discussing what they believed occurred in the process of adulterating drugs, and it seems highly probable Rich made such a mistake here, since in my own

correspondence with Jim, he made similar remarks regarding the quality of rival local labs, though criticizing the *quantity* of active PIED in their product, not the quality of sterilisation procedures: “*I know what gear is in [Rich’s town] and it’s under-dosed as shit... even the good stuff is 50% what it says on bottle*” (‘Jim’, personal correspondence 16.05.2015), a claim that reflects quantitative findings by Coomber *et al.* (2015*i*), suggesting its likely veracity.

Although not denying that sterilisation could potentially be an issue in the processing of steroid powders into liquid product (see Llewellyn and Tober 2010), Jim drew on his experience as a ‘brewer’ in explaining why there might appear an abundance of ‘labs’ putting out a dangerous, or harmful product: “*we had a few people saying things were fake, trying spread bad rumours... they just didn’t like one of the guys they bought something from, and... just wanted to ruin their business, really. It was just... petty maliciousness*” (‘Jim’, interview). Clearly with the rise of the internet, and the knowledge that many potential users look up brand names online before purchasing, any individual who wished to harm a particular business or lab might generate negative stories to scare off potential buyers. Similar practices have been observed in relation to direct-order websites for recreational drugs (Power 2014), and even in the legitimate business market, with businesses posting negative reviews of rivals’ products on websites such as Amazon, to discourage potential buyers (CMA 2015). This supports the notion that accusations of ‘dirty’ product might be false or exaggerated, with the prevalence of truly harmful ‘underground’ drugs likely far lower than rumour and word-of-mouth suggest.

As Coomber (1997*i*;1997*ii*;2006*i*) has discussed in relation to heroin, even if one were to ignore the negative economic impacts on suppliers of putting out a harmful or dangerous product, if these ‘dodgy’ products really were as prevalent as popularly suggested, this should be observable in statistics of hospital admissions, deaths, or longitudinal surveys. Such an exploration of the figures available on harms experienced when injecting PIEDs would allow Jim’s comments to be analysed against the claims of those who believed that unsterilised ‘bathtub brew’ is a real threat to users, and compared in the context of a more rigorous framework. As noted above, Bates and McVeigh (2016) provide recent figures of experiences from a broad slice of the PIED-using population, which can be used for such an analysis.

Whilst 31 percent of PIED users were recorded by Bates and McVeigh (2016) as having experienced pain at injection site (p.8), this could simply evidence lack of knowledge regarding safe injection protocols, rather than harm caused by the compounds injected themselves. As noted, Josh was hurt not because the product he used was ‘dirty’, but because he “*hit a vein*” when injecting (‘Josh’, interview). Similarly, Eddie stated that within his peer network: “*Most of the issues I’ve heard of... [occur] when the actual injections are taking place. They’ve injected an artery, or... they’ve messed it up, basically*” (‘Eddie’, interview). Indeed, the 15 percent difference between the number of individuals who experienced only pain at injection site, compared to those who experienced “swelling, redness or heat” (Bates and McVeigh 2016:8) indicates this is likely the case, since one would not expect an infection to be asymptomatic other than pain.

Such a discounting, however, would still indicate some 16 percent of users potentially suffer the negative

effects of a dirty product, perhaps indicating some truth behind the claim that many 'underground labs' are selling poor-quality "*bathtub brew*" ('Rich', interview). As Jim notes, however, there are reasons a compound might induce pain, redness or swelling, even if sterile and safe: "*sometimes if a little too much alcohol's been put in... a fraction of a millilitre more... in each vial... can cause quite a bad pain in that area... It depends how sensitive the person is*" ('Jim', interview).

Jim, as a supplier, had been forced to deal with individuals who complained of a 'dirty' product, when in fact they were simply using a compound requiring a significant degree of alcohol to suspend in liquid form ('Jim', interview). Jim noted he had been forced to use a boldenone-cypionate batch he had made to sell, and instead sell boldenone-undecylenate he had intended to use himself, because the cypionate ester required so much alcohol to mix at the full (labelled) dosage that injecting it "*feels like you've been shot*", thus making the product unsellable ('Jim', personal correspondence 16.06.2015)⁶⁰. As powerlifter Mariusz noted, for some products, informed users were well aware of this issue, and fully anticipated it:

"[Trenbolone is a] *pain in the arse, literally... you end up standing there for fucking minutes... trying to inject it because you can't do it too fast... after a while you just end up having fucking scar tissue everywhere*" ('Mariusz', interview).

As noted, Mariusz was cautious in his approach to use, conducting significant research prior to commencement, and was highly critical of "*abusers*". He was aware before using trenbolone of this effect, since he had read up on the difficulty of creating a liquid blend of a product with such "*thick particles*", especially at higher dosages ('Mariusz', interview). Naturally, any product which can be expected to cause pain and scar tissue is likely to cause swelling and heat at injection sites, and since some 18 percent of Bates and McVeigh's (2016) users had taken trenbolone-acetate (p.6), the fact that only 16 percent had experienced these side-effects perhaps simply suggests that two percent had an underdosed product, and the remainder experienced fairly ordinary reactions.

Between these factors, therefore, it seems likely that claims there is a lot of 'dirty' product around are an exaggeration, based upon misunderstandings, and perhaps a degree of 'moral panic' (Cohen 1972), possibly in part attributable to malicious misinformation ('Jim', interview). It should be noted before declaring fears of 'underground' product to be mere hysteria, however, that in Martin's case, where he was supervised by a medical professional when injecting, and yet experienced an abscess requiring antibiotic treatment, he very clearly experienced an actual "*dirty vial*" ('Martin', interview). This would suggest that, even if fears are indeed overblown, there nonetheless is a real danger in using such product, and the 2.1 percent of Bates and McVeigh's (2016) users to experience an "*abscess, sore or open wound at injection site*" (p.8) would seem to verify such a claim. Whilst there might be some element of 'moral panic' to respondents' claims of *bathtub brew*'s prevalence, therefore, Martin cannot be said to have behaved irrationally in moving on to "*pharmaceutical-grade stuff*" ('Martin', interview) in response to his experiences, since there is undoubtedly risk in using non-pharmaceutical product. As Jim summarised the sterilisation issues of 'underground' labs, "*sometimes it's unavoidable*" that a bad vial is made ('Jim', interview), especially since

not all labs are overseen by qualified chemists, such as himself (Llewellyn and Tober 2010).

In summary, several respondents reported negative experiences when injecting, or following injection, in similar proportion to Bates and McVeigh's (2016) larger sample population (p.8). Some of these experiences were due to users not following proper injection protocol ('Josh', interview; 'Eddie', interview), suggesting efforts to increase injection service outreach to PIED users is an advisable policy decision (Kimergård and McVeigh 2014). Similarly, the fact that some users equated predictable effects with harm ('Mariusz', interview; 'Jim', interview), which could lead users to alter their behaviour in harmful ways (for example going "cold turkey" from injections without PCT, or switching to oral steroids only, thus "*hammering the liver*" ('Robert', interview)) again suggests a lack of knowledge on the part of many users, and as personal trainer Mark suggests, an information campaign targeting those gym-users most likely to take PIEDs might reduce such harms ('Mark', interview). Contrary to users' beliefs, the prevalence of genuinely 'dirty product' appears low, with only one respondent actually confirmed as experiencing an infection after following proper injection protocols ('Martin', interview), seeming to correspond with Bates and McVeigh's (2016) 2.1 percent response rate for 'infections, sores or open wounds' (p.8). Given a large proportion of steroids come from 'underground' labs ('Jim', interview; Coomber *et al.* 2015*i*; Llewellyn and Tober 2010), however, the potential exists for such harms to increase, especially if individuals without a strong chemistry background decide to enter the market, as profit margins increase with the growing prevalence of use by young men (Llewellyn and Tober 2010). This suggests studies such as Coomber *et al.*'s (2015*i*) are worth continuing, allowing long-term monitoring of such factors, even if much of users' ethnopharmacological knowledge of these harms is based in-part on 'myth' or 'moral panic'.

The process of injecting PIEDs can therefore be said to pose a risk of significant harm to users, particularly those from subcultures who typically conduct less research (e.g. Josh and Eddie's gym peers), even if rumours of widespread "*dirty batches*" ('Simon', interview) or "*bathtub brew*" ('Rich', interview) are likely exaggerations. Interestingly Pete, whose friends perhaps best epitomise such casual users, did not note any issues arising owing to incorrectly-administered injections. However, as Pete noted, there is always an element of social media-focussed individuals hiding negative effects, since "*No-one wants to put themselves down on social media, do they?*", so "*you don't see the side-effects*" ('Pete', interview). As the next section shall demonstrate, young men such as Pete's friends ignore even greater harms than the potential negative effects of "*inject[ing] an artery*" ('Eddie', interview), and if a public health campaign such as that suggested by Mark (interview) is to be effective, such users would undoubtedly need to be prioritised.

Ignoring Significant Health Risks; Exacerbating Medical Conditions

As noted previously, hedonic young male users, such as Pete's peer group, frequently disregarded the risks

of negative health impacts, which might be caused or exacerbated by use of PIEDs (and other drugs), on the grounds that “*I'm gonna die sooner or later... might as well... do what I can [now]*” (‘Pete’, interview). Although links between ‘sensible’ steroid use and significant negative health effects are generally only correlative (Llewellyn 2011), many hedonic users, as noted above, take excessive doses, where the risks of adverse health effects from use are more apparent (George 2005; Rockhold 1993; Pope in Bell 2008*ii*). Additionally, attitudes displayed towards continued use by individuals who have suffered some significant negative health episode already are remarkable, and appear to be fuelled more by a total disregard for longer-term impacts in favour of short-term gains, than balanced analysis of the likelihood of harm being caused by using in such a manner.

Of course, there is some degree of willing risk-taking involved in all PIED use, and it is consequently possible to accuse competitive, sport-oriented users of disregarding longer-term harms, in using PIEDs for competitive purposes (George 2005; Mottram 2005). The differences between the disregarding of harms catalogued in relation to hedonic users, in comparison to sport-oriented users, however, are significant, and therefore worth exploring in detail. Since in the present research it was hedonic users who tended to experience the most significant negative health events, outside those sustained in the course of injecting (above), this section shall begin with an exploration with this group’s behaviours. Although many of these cases relate to pre-existing medical conditions, and not to harms perceived to have been *caused* through use of PIEDs, it is nonetheless worth exploring the attitudes displayed by these individuals towards use in spite of their health concerns, which can be contrasted with the approach and experiences of other users, documented above.

Pete’s friend ‘Jean’ will, according to Pete, “*take it all*” when it comes to PIEDs, and is similarly, along with the other “*lads*” in his peer group, involved in binge-consumption of alcohol, and recreational drugs (‘Pete’, interview). Pete is generally accepting of “*lad culture*”, as an active participant in the nightclubbing, and social weight-training scenes. However, in discussing Jean’s health, he was somewhat critical of his friend’s disregard for the effect “*fat burners*” and other PIEDs might be having on his long-term health: “*two years ago he had a heart attack on a night out... we all say like "...taking this many enhancers, this many fat burners... your heart rate [will] be all over the place". He has to go to the doctor's every month, just to get his heartrate monitored, to make sure it's all right*” (‘Pete’, interview).

Although Pete does not suggest the use of “*enhancers*” was the initial cause of Jean’s heart condition, he nonetheless opines that continued use of such stimulants, following a heart attack, is not advisable, and suggests that many of Jean’s friends agree (“*we all say*”). As noted elsewhere, hedonic users can be easily distinguished from image-focussed individuals such as Eddie and Harry in their obsessive pursuit of short-term goals, such as “*summer in Ibiza*”, and being “*the biggest alpha male... in the club*” (‘Pete’, interview); in Jean’s case, this manifests itself in such a strong desire to look and act a certain way that he willingly puts his long-term health at risk, by continuing to participate in activities that even other members of his social group (who mostly similarly partake in these drugs) warn he should not be persisting in.

When I asked whether or not Jean had made his doctor aware of his PIED use, Pete responded that “[Jean]’s never mentioned to me that he’s said to the doctors that he’s doing stuff... I think he keeps it quiet” (“Pete”, interview). Robert, in his physiotherapy practice, documented a similar reluctance by many clients to confess to PIED use, noting how “*there’s... people who come in and you say ‘any medications?’ and they don’t mention it, and I don’t push the point... so you know... I tend to [rely on] ‘do they look like they have?’*” (“Robert”, interview). Although a physiotherapy practice is somewhat different to a doctor’s practice regarding the relevance of PIED use for the practitioner’s purposes, it is nonetheless significant to note the reluctance of many individuals to confess to PIED use when seeking treatment, a factor that could potentially cause complications (Simmonds and Coomber 2009), especially in the case of individuals prescribed other medications, as presumably is Jean.

In a similar case, Pete discussed another friend, dubbed ‘Stickman’, who has also “*dabbled*” in PIED use, noting “*I mean he’s got a dodgy heart anyway... so, ideally, shouldn’t be taking steroids*” (“Pete”, interview). Whilst Pete was unable to dissuade Jean from continued use of PIEDs following his heart attack, he noted how in Stickman’s case, he was successful in convincing him to stop using, owing to his health concerns: “*I told him at the time. I was like ‘mate, why are you doing that? You’ve got a dodgy heart anyway... you should be on more natural products’*” (“Pete”, interview). Interestingly, the context of this exchange perhaps indicates something of the peer group’s hierarchy: whilst in Jean’s case, Pete only told his friend “*clinically you should be dead*” (“Pete”, interview), without explicitly requesting he stop using, in Stickman’s case, Pete – the seemingly higher-status male – was able to convince him to cease using, through cautioning that he should be on “*natural products*” instead. In both cases the individual involved was at least somewhat aware of the risks without Pete’s intervention, but chose to ignore them in pursuing their respective goals. In Stickman’s case, however, Pete was more willing to criticise him, perhaps suggesting some paternalism towards ‘lesser’ ranked members of the peer group on Pete’s behalf (an inference based on Stickman’s derogatory nickname). Such behaviour has been witnessed in other subcultural groups, such as street gangs (Burgess and Akers 1966; Hooks 2003; Venkatesh 2008), and amongst recreational drug users (Becker 1963; Young 1971; Belackova and Vaccaro 2013), where an individual might caution a ‘lesser’ member of the group against performing an action which they are uncritical of when performed by an equal, or higher-status member. Inevitably, such relationships are inherently hierarchical, and this ties back in with the “*alpha male*”/‘beta male’ relationship identified by Pete earlier in this research (chapter four), again relevant to ‘cultural transmission’ (chapter five).

In his core group of friends, Pete is relatively uncritical of those who continue to use in spite of evidence they are harming themselves, whereas he is happy to reprimand individuals he associates with more broadly (such as Stickman), if he perceives their actions to be harmful. In the case of his girlfriend’s brother, for example, Pete made comments similar to those criticizing Stickman, warning him not to take trenbolone-acetate, as “*some lad... in the gym*” had suggested he should, stating: “*I was like ‘mate, don’t – just don’t. tren is not the way to go for you... you’ve got a dodgy heart’*⁶¹ (“Pete”, interview). Again, it is

worth noting that Pete himself trains primarily for strength, and uses only 'over-the-counter' PIEDs, indicating he personally (similar to Eddie) identifies in many ways with sport-oriented users, even though he is not a competitive trainer. Interestingly, in the case of the two individuals he recommended should not take steroids owing to health concerns, presumably left to their own devices, as hedonic, or 'social' trainers, they would have gone ahead and used the PIEDs recommended by other such individuals in the gym, thus highlighting the lack of concern such users have for potential negative health impacts, or their health more generally. Again, this can be related back to the deleterious effects of "*social media culture*", and the inherent hiding of the negative concomitant with the exaggeration of the positive therein ('Pete', interview; Bleeker 2014).

Pete's friend 'Mike' perhaps best epitomises the end point of this "*social media culture*" in respect of ignoring potential harms for immediate, visible gains, and his reaction to a cancer scare is emblematic of the most problematic of such behaviours: "*Mike had this mark... on his skin... 12mm, and he's had it for six months! So, he's gone to a doctor... they've panicked and said 'right, you need to get yourself to the hospital'. So he's got an appointment... but – this is the sort of mind-set of these lads – he's said 'right, well I'd better inject as much melanotan as I can before I go to the doctor's. I'm going to the sunbeds tomorrow. Like, 'If I'm going to the hospital tomorrow, I want to look tanned'*" ('Pete', interview).

The idea of a person who believed themselves to have skin cancer immediately reacting by injecting themselves with a tanning drug that may have "side-effects [which] could be extremely serious" (MHRA 2008), and using a sunbed, a device well-documented as increasing the risk of skin cancer (Westerdahl *et al.* 2000; Levine *et al.* 2005), seems *prima facie* absurd. As with the behaviours of anorexics (Sullivan 1995), and those suffering severe body-dysmorphic disorder (Grant *et al.* 2005; Phillips and Menard 2006), one wonders whether 'Mike' might be suffering some form of body-oriented delusion, causing him to ignore a present and visible harm, in order to achieve the appearance for which he is striving. To Pete however, such behaviour, although remarkable enough to highlight in interview, was not beyond "*the sort of mind-set of these lads*", the use of the plural here suggesting he did not differentiate Mike's behaviour from Jean's, or the other "*lads*", who are similarly reckless, even if not in so obvious a fashion as Mike. As far as Pete was concerned, Mike's behaviour could be summarised simply as: "*he's all about his image. He's all about the social media*" ('Pete', interview), a victim to social factors, and not necessarily a severe psychological disorder. Indeed, the fact that there are "celebrity" members of this culture who have similarly had heart attacks following their abuse of substances (both PIEDs and stimulants such as cocaine), including Aziz 'Zyzz' Shaversham, who died from a heart attack at 22 (Olesker 2015), and Dan Bilzerian, who had two heart attacks at the age of 25 (Rogan 2016*ii*), would seem to evidence this perspective that such reckless behaviour is more socially-influenced, and a significant part of this rising culture.

This social media "celebrity" influence can be related to Pope *et al.*'s (2000*i*) analysis of the influence of changing media representations of the male body on young men, which fuels steroid and other PIED use, indicating it is highly possible the apparent epidemic of body obsession observed in young men in recent

years (Bleeker 2014; Olesker 2015; Guardian 19.06.2015) is indeed attributable to the ill-effects of social media exposure, as 'Pete' suggests. A more in-depth explanation of this phenomenon is naturally beyond the scope of this research, however it is important to note that the desire to look a certain way for Facebook and Instagram, regardless of potentially-fatal side-effects, fuels behaviour of this type often enough that Pete, immersed within the "*lad culture*" and hedonic "*workout culture*", does not see such behaviour as being so egregious he would suspect an individual exhibiting it to be suffering from a cognitive disorder, and feels that "*social media culture*" is instead the proximate cause of such behaviours ('Pete', interview).

Social media-oriented hedonic users were not the only individuals who ignored their health in pursuit of their goals, however, and although none of the competitive users interviewed experienced any particularly significant damage to their health, beyond anticipated side-effects, there was nonetheless frequent mention by a number of respondents (from multiple user subcultures) of local celebrity 'Stavros', an infamous doorman, and strongman competitor, who uses such a large quantity of PIEDs that many have stated he "*won't live to see 40*" ('Dom', field diary 15.08.2015). I personally have witnessed Stavros training in a local gym, where he began to bleed from the nose whilst squatting, an apparently common side-effect of using such large quantities of steroid that one's blood pressure skyrockets (Llewellyn 2011:35), or blood volume itself increases from use, causing similar negative effects (Rockhold 1993; George 2005). Indeed, Stavros has been barred from several local gyms, including the 'hardcore' bodybuilding gym *Dave's*, and according to Jim, this was primarily motivated by the owner's fears Stavros would have a heart attack on the premises (field diary 01.03.2014), an especially potent claim given that, based on my observations, the owner of *Dave's* is certainly a PIED user himself.

As noted last chapter, the "zero-sum" nature of high-level competitive strongman events was undoubtedly a significant motivating factor for Stavros in his over-use of steroids, and he was certainly aware of both the diminishing returns associated with excessive use, and the simultaneous convexity effect (Taleb 2012) associated with negative side-effects when so doing, being highly educated⁶². Of note, however, is that Stavros is well known for his extreme usage, and indeed is the only competitive lifter in the local area with such a reputation. This is of course in contrast with the hedonically-motivated users, of whom there are many known to be using in extreme, harmful dosages ('Big Steve', field interview), which relevantly has been identified by some as resulting from an insecurity, or complex, as Robert suggested he believed to be common amongst many heavily-using image-focussed trainers ('Robert', interview). As rugby player and powerlifter 'Dom' noted, Stavros is "*too short*" to be successful in strongman, and so seemingly over-compensates by getting as broad as he can, by whatever means necessary (field diary 15.08.2015). Harmful use is therefore clearly present amongst some competitive trainers, and indeed, the story of Stavros's 200mg of 'DBol' as 'comp-prep' (almost seven times the recommended dose given in Llewellyn (2011)) is something of a local legend. However, whilst Stavros is something of an outlier in his community, it is clear

that hedonically-focussed users are frequently causing damage to their health through similarly incautious use, and there exists still a notable division between categories of user, even if the boundaries are not completely black-and-white.

Perhaps the only competitive user to ignore a potentially serious health risk other than Stavros was Rich, who experienced a cancer scare upon cessation of a cycle, and whose case is particularly worth reviewing at this point. Last chapter it was noted that, following his cycle and PCT, Rich experienced some negative effects, such as weight loss, lack of drive, and other minor (but generally expected) problems. Rich stated this experience had motivated him to conduct further research into the effects and correct use of steroids (believing he had “messed up” his PCT), and had in-part motivated him to move from steroids to human growth hormone, which does not have such associated effects (‘Rich’, interview). A few months after our interview, however, Rich and I were speaking in the gym, when he confessed to me that he had suffered another negative effect of which he had not previously informed me, and which he claimed he had “forgotten” to bring up during our previous interview:

RL: *Basically, after I came off and I did the HCG and all that... I didn't have any sex drive or anything. But I mean, I didn't have a girlfriend at the time, so it wasn't an issue. But basically I wasn't interested in sex at all, wasn't even jerking off – and I normally jerk off, like, literally every day [laughs] – So obviously something was up with that!... but that's just a normal effect of coming off, right?*

LT: Yeah.

RL: *But after a few weeks when my balls started coming back, the left one was much bigger than the right one. To the point where I was legitimately worried, looking for medical advice online... and I was on these forums saying “look, one of my testicles is twice the size of the other, what should I do?” cos I didn't want to go to the doctor and tell him I was messing around with steroids, and have that on my medical records permanently.*

(Field diary entry 25.09.2015)

In discussing this incident, Rich noted how “*I was legitimately worried it might be cancer or something, so that was a bit scary. And I think that maybe contributed to the weight loss, cos I was just too scared to worry about training for a while*” (‘Rich’, field diary 25.09.2015). In the end it turned out not to be cancer, however it is nonetheless important to note Rich’s comment that he “*didn't want to go to the doctor and tell him I was messing around with steroids, and have that on my medical records permanently*”. This is the only example of a sport-oriented user interviewed for this project disregarding his health in a manner comparable to hedonically-motivated individuals, and his reasoning is significant. Although it can also be assumed that embarrassment played a role (and I assume is the reason Rich did not relate the story to me in the initial interview, bringing it up some time later, and prefixing it in a ‘joking’ manner with a masturbation reference), Rich specifically cites a fear of his doctor discovering he is on steroids, and this being permanently featured on his medical records.

Rich’s fear was certainly not unfounded, with one of Jim’s friends having informed his doctor he was using

testosterone, and subsequently discovering this had been entered into the NHS's computer system, where it will remain permanently (above). As a result, Rich had instead taken to online forums, in the hopes they would give him useful advice. Certainly, from a harm minimisation perspective, this story is particularly significant, demonstrating how a fear of stigmatisation can dissuade an otherwise intelligent, and seemingly informed individual from seeking help, through fear of the consequences⁶³.

Although perhaps not on the same level as Pete's friend 'Mike', Rich's experience nonetheless demonstrates a certain disregard for health, ignoring a lump he thought could be cancerous rather than visit a doctor, and have to confess he was on steroids. Given that testicular cancer has the potential to be extremely aggressive, and delays in treatment of only days have been documented to decrease chances of survival (Mason and Strauss 2004), this is not an insignificant finding. This demonstrates how even 'sensible' users can fall prey to risky behaviour, and since Rich did not admit to this in interview, but only later, when we were 'hanging out', one wonders how many similar stories exist for sport-oriented individuals, but are kept secret. The potential for 'hidden ethnography' (Blackman 2007) in dealing with sensitive subjects must again be acknowledged, therefore, and although my emotional and friendship connection with Rich allowed for the discovery of this finding (Blackman 2016), it is clear that such experiences may be hidden from researchers owing to embarrassment, which highlights the importance of the emotional, and reflexive approach in this type of subcultural research (see chapter two).

In relating the story to me, Rich indeed acknowledged how reckless his behaviour had been, noting of the forum he visited for advice: "*I don't know if [the poster who helped] was actually medically qualified: it was an anonymous forum [laughs]. But [his advice] did seem to help*" ('Rich', field diary 25.09.2015). This is worrying behaviour, although it should be noted that, significantly, Rich did take a more cautious approach to PIEDs following this experience (previous chapter), and can therefore be distinguished from users such as Pete's friends 'Mike' and 'Jean' in this regard, as well as Simon, who did not adapt their behaviour following negative experiences. Being a sport-oriented user might therefore have helped Rich take better stock of the significance of his health, and the risks he was taking, however it is equally likely that, as an intelligent and educated individual (Rich has a degree), he was simply naturally predisposed to reacting more sensibly than the other users identified in this section. Solid conclusions regarding use in the face of significant health effects can therefore not definitively be drawn, however there is certainly a precedent of hedonically-motivated users causing themselves significant harm that does not seem to be replicated to the same extent amongst sport-oriented individuals (Rogan 2016ii; Olesker 2015).

Before concluding, it is worth noting a final suggestion by Rich, regarding the apparent trade-off between health, and competitiveness, which seems to exist for all users. Whilst one might be tempted to argue that all use is inherently risking one's health, meaning even cautious, competitive users are nonetheless dismissing significant risk, Rich suggests that use of PIEDs is not necessarily 'zero sum' in this manner. In interview, Rich noted how he used the potentially harmful peptide 'kigtropin' (HGH) in a rational manner, deliberately weighing the risk of long-term harm against his present comfort, given he had numerous

problems with his joints, including his knees, hips and shoulders (a common phenomenon amongst powerlifters (Bell 2015)): “*how I feel day-to-day, like my joints when I'm at work, or whatever... having good joints to me would be better than some obscure worry about getting cancer or heart disease in twenty years' time, so to me if I can get hold of... growth hormone, [I'll take it]*” ('Rich', interview). In the same way as hedonic users trade-off longer-term health to look good in the present, Rich suggests he is trading-off his longer-term health for the sake of his present day wellbeing, and this is significant, as it shows that even the use of ‘hardcore’ compounds such as HGH, might in fact be both rational, and in some ways a sensible response to pre-existing health conditions, in fact lessening, not exacerbating some. This argument was referenced by Chris in relation to fighters (chapter four), and indicates how what might appear from an outside perspective to be harmful behaviour is in fact sometimes the result of considered, rational analysis of one's situation. Rich was undoubtedly behaving in a risky manner when it came to his refusal to see a doctor, but his general use was if anything measured, and apparently wholly reasonable.

Chapter Conclusion

It is clear the identified division between user categories is largely accurate regarding longer-term use, albeit with notable departures. Levels of caution and planning in longer-term use can clearly be divided along ‘competitive’ versus ‘hedonic’ lines, with non-hedonic image-focussed users falling somewhere between these distinct categories, although significantly a number of competitive users behaved in a reckless manner in relation to certain beliefs and actions. Despite carefully researching optimum dosages, and periods of use, as well as investing in steroid accessory drugs, and generally abstaining from alcohol, several competitive-type users nonetheless disregarded harms, or avoided visiting NSP or GPs, principally through a fear of stigmatisation (Goffman 1963; Simmonds and Coomber 2009), suggesting areas for future research and policy to address.

Regarding normalisation, it is clear from an analysis of the changing methodologies of use identified in this chapter that PIED use is indeed becoming ‘normalised’ amongst groups that historically have not engaged in such behaviours, helping explain the differences in findings observed by Bates and McVeigh (2016), compared with earlier analyses of users (Evans 1997; Monaghan 2001). The evolving ethnopharmacological taxonomies of use identified as prevalent in online forums, and adapted by some sport-focussed users in this research, also indicate an evolution in the manner in which competitive users utilise these drugs, and further point to a normalisation of behaviours previously unseen, and identified only in recent publications (Sagoe 2015).

The findings of this chapter therefore appear to give an accurate, and detailed explanation of the state of use of these drugs, and attitudes surrounding them, amongst the identified user categories in the present

year. In order to confirm the thesis of normalisation as laid out by Parker *et al.* (1998), however, it is still necessary to explore the degree of cultural acceptance of these drugs. Given the present chapter presented some degree of evidence that a 'stigma' towards use, and revelation of personal use still exists, it is therefore necessary to explore this element of 'stigmatisation', and the presence of 'moral panics' and 'folk devils', relating to this population. This shall be the focus of the next chapter.

7 A Stigmatised Population? The “Folk Devil” of the PIED-User.

Introduction

In chapter three, the question of “cultural accommodation” of PIEDs was discussed, with consideration paid to the apparent ‘stigma’ attached to use, which several respondents noted in the course of interview. Whilst arguments were made there regarding whether this could be considered evidence against the thesis of ‘normalisation’, the debate regarding the extent to which PIED users of all kinds are stigmatised is worth exploring in-depth, and this shall form the focus of the present chapter.

To Erwing Goffman (1963), stigma relates to an ‘attribute that is deeply discrediting’ to the individual, the reaction to which leads to the ‘spoiling of normal identity’. Goffman (1963) suggests an individual can be stigmatised based on certain character traits, physical characteristics, or group membership, the negative public associations of which can cause one’s ‘actual social identity’ to be spoiled by a ‘virtual social identity’ (p.3), where the perceptions of others towards the individual’s stigmatised traits can become the stigmatised person’s ‘public identity’. This can lead either to internalisation of aspects of the spoiled identity, or reaction against it, which may form either a positive response to minimising or ‘managing’ the spoiling of identity (p.22), or else ‘hiding’ to avoid this stigma, which can create anxiety, depression or self-consciousness in the stigmatised individual (p.17).

Goffman (1963) relates the idea of ‘stigma’ to conceptions of ‘deviance’, and social control, and Howard Becker’s (1963) theory of ‘labelling’ similarly show how a stigma can be applied to a ‘deviant’ group, which ‘spoils’ the public identity of its members, and causes both internalisation, and reaction. Becker’s (1963) ‘Outsiders’ illustrates how drug users can be ‘labelled’, and ‘stigmatised’ for their group membership, or perceived character traits, and subsequent research into drug-using groups has often explored elements of ‘stigma’ in the perception of these subcultures (e.g. Young 1971). For PIED users, ‘stigma’ has been addressed both in relation to the perceived stigma attached to them as injecting drug users (Simmonds and Coomber 2009), as explored last chapter, as well as by Monaghan (2002*ii*), who relates the stigmatisation of perceived characteristics of bodybuilders to Cohen’s (1972) theories of ‘folk devils’, with the use of steroids ‘demonised’, and the physical characteristics of the ‘bodybuilder’ physique thus ‘stigmatised’ as ‘deviant’.

This chapter shall therefore build upon the analyses of Simmonds and Coomber (2009), and Monaghan (2001;2002*ii*), in exploring the extent to which PIED users are a ‘stigmatised’ population (Goffman 1963), or “folk devils” (Cohen 1972), and shall apply these arguments to the present framework, exploring both the thesis of ‘normalisation’, and the different beliefs of the divergent categories of user highlighted in this research. To this end, the chapter shall commence with a brief note on users’ perceptions of stigmatisation,

before discussing the main areas in which such stigma appears to exist. These sections shall address the concept of “roid rage”, and “use of other drugs”, respectively. The chapter shall then conclude with an analysis of what these findings mean in the context of this research more broadly, and what this is likely to mean for a ‘normalisation’ of use in the coming years.

Perceptions of Stigmatisation

The conservative polemicist Theodore Dalrymple makes reference to “doormen and body-builders”, and “the dangers involved in associating with such types” for young women (Dalrymple 2009:167), suggesting such men are frequently violent, and to be avoided. As Monaghan (2001;2002*ii*) notes, such a perception of PIED-users is not uncommon, and such rhetoric has also taken aim at mixed martial arts fighters (Times Magazine 01.04.2017), and other populations associated with PIED use, indicating a likely ‘demonisation’ of these subcultures.

The period in which PIED users began to experience increased public condemnation of their activities coincided both with a growth in the popularity of bodybuilding (Monaghan 2002*ii*; Hotten 2004), and a backlash against PIEDs in the sporting world (Coomber 1999;2013), fuelled largely by the controversies of the 1988 summer Olympics (Dubin 1990; Moore 2012; Waddington 2000). Whilst this stigmatisation appears to have subsided somewhat in the intervening years (Bell 2008*i*), and with the resurgent growth in popularity of weight-training (Olesker 2015), it was clear in the course of this research that some users nonetheless felt to some extent ‘stigmatised’ by normative society (Goffman 1963), leading to their hiding use from peers, family, or even doctors.

As noted last chapter, individuals from all classes of user were worried about visiting needle and syringe programs (NSP), with powerlifter Rich supplying his fellow powerlifters with apparatus from such establishments ('Rich', interview), whilst image-focussed Simon (interview), and Pete's hedonically-using friendship group bought their needles over the internet ('Pete', interview). Eddie, meanwhile, expressed concern his parents would find out about his PIED use, noting there were a lot of “*myths*” about how dangerous PIEDs – especially steroids – could be, which he worried his parents would believe, and as a consequence think negatively of him ('Eddie', interview). Reflecting on this, Eddie noted how: “*they're always gonna say 'it's this, it's that', purely because that's what the media needs, something to feed off, people to read*” ('Eddie', interview), indicating PIED users are victim to the same media focus on sensation and scandal that for recreational drug users reinforces the label of the user as ‘other’ (Blackman 2004:127).

Pete similarly noted he observed “*stigma around the word, 'steroid'*” (interview), and evidencing this claim related a story about a time a friend suggested he use the steroid ‘anavar’, because it would help him

lose fat and gain muscle, prompting the following exchange with his girlfriend:

"I was like 'Oh, it's a testosterone booster'. 'Oh, well why don't you take it?'. And I was like... "We have spoke about this... you was like 'my boyfriend's not taking steroids, blah blah', and she was like 'Oh, it's a steroid?'. I was like... 'you was all keen for the idea... soon as I mentioned it's a steroid: 'oh, well I don't think you should do that'."

(‘Pete Robinson’, interview 20.02.2016)

Perhaps the starker representation of a perception of stigmatisation amongst users came in the form of my own requests to interview some individuals, whom I knew only casually. In some cases, I would overhear individuals talking about their use, or approach someone I had been informed on good authority was using, only to be met with a response along the lines of “I don’t know anything about steroids, I’ve never used them”. The most egregious case of this came when I contacted a personal trainer over Facebook, detailing the research, and asking if he would be interested in participating in an interview. The response I received was “[steroids are] *not for me mate sorry I can't be helpful*” (Anon, personal correspondence 16.08.2016), which struck me as somewhat amusing, since he had posted numerous public comments on a mutual friend’s wall detailing his PIED cycles and stacks. Naturally, I did not pursue the issue further, but this illustrates the way in which users who are happy to talk openly about their use to others within their subcultures, or cultural environments (in this case a fellow PIED-user’s Facebook wall) would instantly switch to being cautious, and unwilling to detail their use when approached by someone they perceived to be an ‘outsider’ (despite my competitive powerlifting background). This perhaps evidences that social accommodation is perceived by PIED users to have been achieved, but there is a very real worry that use is not culturally accommodated, and is thus ‘stigmatised’, even if the results of use are culturally encouraged (chapter three).

It is therefore worth reviewing the major issues that appear to generate this perceived ‘stigma’, primarily the supposed phenomenon of “roid rage”. Since a lack of cultural accommodation might be argued to be the final element keeping PIED use from satisfying Parker *et al.*’s (1998) criterion for ‘normalisation’, it is worth investigating the arguments on either side of this issue in greater depth.

“Roid Rage”

'Roid Rage' is the alleged phenomenon of uncontrollable outbursts of violent anger, often attributed to anabolic-androgenic steroid users. Media reports have blamed 'roid rage' for such incidents as the Benoit murder-suicide (CNN 29.06.2007), episodes of police brutality (NJ Star Ledger 12.12.2010), the attempted murder of police officers (Channel 4 05.07.2010), “random” street violence (IB Times 07.12.2011), mass

shootings (Daily Mirror 28.05.2014) and even acts of terrorism (BBC News 31.05.2012; LA Times 15.07.2016). To cite a recent example, the Mail on Sunday's Peter Hitchens questioned on BBC Radio 4 in July 2016 why the connections between the drug use of 'mass shooters' Omar Mateen and Anders Behring Breivik, as well as murderer Raoul Moat, all anabolic steroid users, were not being more closely scrutinised by other members of the media, or politicians, as this was the common link between them (BBC Any Questions 22.07.2016). Although this type of psychotic outburst of violence, or 'snapping', receives the most attention in media reports of "roid rage", lesser incidents involving aggression are similarly considered part of the phenomenon, and such acts as overturning gym equipment (Fox News 11.01.2012), or driving aggressively (Fussel 1991), to incidents of young men fighting in the street (Gladstone Observer 13.01.2014), have all similarly been attributed to "roid rage".

Connections between the use of steroids and likelihood of being involved in violent incidents have been shown in longitudinal studies of young adult males, which demonstrate that even when variables such as age, polydrug use and race are accounted for, steroid users still report "greater involvement in violent behaviour compared with males who reported never using anabolic-androgenic steroids" (Beaver *et al.* 2008:2186). Pope and Katz (1994) reported that some 3.4 percent of PIED users studied (3 of 88) on more than one gram of steroids per week experienced a 'psychotic episode', with others reporting feelings of increased agitation, or aggression. However, writers such as Coomber (1999;2013) have questioned the extent to which such findings prove any causative link, suggesting that claims of steroids causing uncontrollable aggression might be a case of 'moral panic', similar to myths that surround other stigmatised cultures, such as heroin users (Coomber 1997*i*;1997*ii*;2006*i*). According to Monaghan (2002*ii*), Bodybuilders became a 'folk devil' for the media in the 1990s, and thus stories which fit this narrative became over-represented in mainstream reporting (p.696). The question of 'roid rage' is therefore worth exploring regarding the qualitative experiences and beliefs of respondents in this research, building upon similar work conducted by Monaghan (2001;2002*ii*) in a more homogeneous population of bodybuilders, which sought to explore the same phenomenon. It is to this exploration that the chapter shall therefore turn, beginning with a discussion of the phenomenon of 'roid rage' as myth (Coomber 1999;2013).

'Roid Rage' as Myth

As noted in chapter three, many individuals involved in PIED-using subcultures believe the phenomenon of 'roid rage' to be 'myth'. As Coomber (1999) suggests, risks of PIEDs as portrayed by the mainstream media are frequently "out of proportion to reality" (p.115), and a number of factors that might better explain incidences of aggression or violence within steroid-using populations are often not considered by the media when reporting on 'roid rage' incidents (Coomber 1999). As such, users with first-hand

experience of steroids tend to perceive the media narrative with regards to violence amongst steroid users as false, or at the very least exaggerated (Duchaine 1989; Monaghan 2001), since reports do not align with their own experiences and observations, from their place within steroid-using subcultures. This pattern, identified by Coomber (1999) and others (Monaghan 2001; Bell 2008*i*), was reflected by many respondents in the present study, who frequently stated a belief that 'roid rage' was either wholly invented by the media, or else a rare, and exaggerated phenomenon: "*I've not known a single case of it. Not at all... I don't know anyone who's had real 'roid rage', or anything like that*" ('Eddie', interview).

Compared to the mainstream news narrative that 'roid rage' is a dangerous phenomenon, responsible for all manner of violent acts (above), in Eddie's experience, none of his friends or peers who use PIEDs have ever experienced "*real 'roid rage*" of any kind, including those who, as identified last chapter, use doses a lot higher than his own: "*I know quite a few people using... three mil [of steroids]... three times a week*" ('Eddie', interview). Whilst Eddie does not state categorically that it is not possible for steroids to bring out aggression in anyone, owing to Eddie's security work, and frequent presence in user environments such as gyms, the fact he has never once witnessed an incident he would describe as 'roid rage' suggests that, if such a phenomenon does exist, it is exceedingly rare. Such a perception was supported by several other respondents: "[there's] *an occasional fucking moron who... snap[s] on it, but... like statistically it's such a small fucking number*" ('Mariusz', interview).

Although acknowledging a link between steroid use and violence, in Mariusz's opinion such occurrences are so rare as to be almost statistically insignificant. In Mariusz's opinion, the mainstream media in discussions of 'roid rage', have a tendency to grossly exaggerate the potential risks, and he notes how, when reading reports of possible 'roid rage' events, "*every time they can tie it up to steroids they do*" ('Mariusz', interview). Coomber (2013) identifies this predisposition of media organisations to blame the violent acts of drug users on the drugs themselves, in his discussion of the ways in which a social fear of drugs in sport has influenced the portrayal of the risks of those drugs outside a sporting context, suggesting Mariusz's cultural perception may have some academic merit (see also Monaghan 2002*ii*). Indeed, such theories of media bias, based on a desire to exaggerate the harms of PIEDs owing to negative perception of their use in sport, have been advanced by users since at least the late 1980s, when the author of the *Underground Steroid Handbook* suggested that "since the media and the medical community have not been able to establish a pattern of concrete, serious health problems occurring in athletes taking steroids, then the other recourse in order to keep fueling the fire is to explore the psychological damage that steroids could cause" (Duchaine 1989).

Although not identifying this possible root cause in the way Coomber (2013) and Duchaine (1989) have, Mariusz nonetheless strongly believes the media, in publicizing supposed 'roid rage' incidents, are seeking to 'demonise' users (Monaghan 2002*ii*; Cohen 1972), and notes these efforts by the media can be seen to occur regardless of whether there is evidence that an individual's steroid use played a part in their violent behaviour, or indeed if the individual can even be confirmed as having used steroids, as opposed to simply

being a “gym user” (‘Mariusz’, interview). This agenda on the part of some media organisations, Mariusz believed, spilled over into daily life, leaving people more liable to attribute any aggression observed in steroid users to their use of these substances, as opposed to other possible factors: “*every time you would get pissed off, [people] would attribute it to [the steroids], you know? And it's like 'hang on. Why can't I just get pissed off?’*” (‘Mariusz’, interview). Mariusz compared this situation to that of people who believe “*you[could] get... weed-induced psychosis*” without a prior mental health condition, because it is greatly over-emphasised in popular reporting, a comparison made by others (Bell 2008*i*; Coomber 1999;2013).

Supporting the assertion that such incidents were indeed a result of false attribution, influenced by the popular media narrative, and not legitimate responses to actual ‘roid rage’ incidents on his part, Mariusz pointed out that the majority of people he met were unaware he used PIEDs until he explicitly told them so, and only received such reactions from those who had already discovered he was on them, indicating his aggression was nothing out of the ordinary (‘Mariusz’, interview). As Mariusz notes, when he would ask people he had not explicitly told of his use the question “*do you actually know anybody who was on steroids?*”, he would almost unanimously receive an answer of “No” (‘Mariusz’, interview), strongly supporting the notion that a false media narrative influenced the opinions of those who suggested any anger on his part was due to his steroid use. Mariusz’s approach to such conversations mirror’s Goffman’s (1963) notes on how stigmatised individuals can ‘manage’ their spoiled identity through their approach to conversations with ‘normals’, with Mariusz attributing the stigma to ‘ignorance’ rather than maliciousness, and attempting to refute the assumptions of his ‘normal’ associates through honest discussion. Whilst this interaction suggests the existence of stigma, therefore, it also indicates a means through which accommodation may spread, as with Parker *et al.*’s (1998) respondents’ discussions of cannabis with parents, which shall be shown to be a recurrent theme amongst respondents in this research.

Mariusz’s belief that ‘roid rage’ is a form of ‘moral panic’ (Cohen 1972) comparable to ‘reefer madness’ (see Blackman 2004), has support in the academic literature (Coomber 1999;2013; Monaghan 2001;2002*i*), and does not appear to be based on merely excusing his own actions in using. In interview, Mariusz was able to cite a specific incident to support his claim of media bias, wherein a local newspaper had “*tie[d] in steroids with*” a violent incident, “*because the[offenders are] big and go to the gym*” (‘Mariusz’, interview). Mariusz noted there was no reported evidence that the individuals involved actually used steroids, and the incident had occurred outside a nightclub, meaning alcohol was a more probable cause for their violent behaviour than steroid use (‘Mariusz’, interview). Responding to this reporting, Mariusz stated his belief that, in all likelihood, the aggressor was simply “*some dumb-fuck... who decided to make himself feel better by punching somebody on the street*” (‘Mariusz’, interview), and would have acted in this manner regardless of whether he was on steroids or not.

Such an assertion that people who are violent when on steroids are violent people regardless parallels opinions cited in Monaghan (2001), where a common theme of “you have to be like that in the first place” (p.167) emerged. As Coomber (1999) notes, incidents such as that cited by Mariusz are often reported

without taking account of “the context in which the violence occurs” (p.115), and therefore steroids might be suggested as a cause of violence where they are far less likely to have been a factor than, for example, alcohol. Supplier and user Jim similarly expressed his opinion regarding such incidents, noting “[violent] people use other [drugs], or just generally feel the need to behave in that... way”, and that one cannot trust reports regarding ‘roid rage’, wherein “it always seems to come back to the steroids rather than other things they've taken, and the fact that they generally behave like arseholes the majority of the time anyway” (‘Jim’, interview).

As noted elsewhere, Jim was familiar with much of the literature regarding PIED use, and user subcultures, and it is interesting how closely his above analysis parallels (although in rather different language) that reported in academic discussions of this phenomenon (Coomber 1999; Monaghan 2001). From Jim's perspective, there is an element of “you have to be like that in the first place” (Monaghan 2001:167), in his suggestion violent users “generally behave like arseholes... anyway” (‘Jim’, interview), as well as a deceptive element in reporting, for example ignoring the impact of alcohol or other drugs in reports of ‘roid rage’, as described by Coomber (1999). Summarizing this belief, Jim states that “*the sort of myth of 'roid rage'... in my opinion, stems from people... taking steroids... then going out on a Friday night... and then getting into fights*” (‘Jim’, interview). As both a supplier, and a member of a using subculture, Jim was familiar with many of the individuals involved in local incidents, and was able to summarise his experience of the different types of user thus: “*A [competitive] bodybuilder will go to the gym, take steroids, just go home, eat some chicken and go to sleep. Whereas a 'gym rat' will go to the gym, take some steroids to... look bigger, so they can go out to the pub, and pose in front of people, and generally cause arguments*” (‘Jim’, interview).

In addition to highlighting the role of alcohol in such incidents, Jim suggests that the type of individual who wants to look intimidating in a pub or club is simply more likely both to use steroids, and get into fights, than the average person, but emphasises that this does not suggest the steroids themselves actually cause aggression (‘Jim’, interview). Indeed, as Jim notes, those serious trainers such as competitive bodybuilders, who tend to abstain from drinking alcohol (previous chapter), do not appear violent at all, and it tends to be primarily those who drink or take other drugs in combination with steroids who are problematic. As Coomber (1999;2013) notes, competition-oriented steroid users tend to be employed, teetotallers, and less involved in criminal activity than the average young male (see also Lenehan *et al.* 1996), a pattern unlikely to exist if the steroids themselves made users violent. It therefore seems likely Jim's assertion that those involved in ‘roid rage’ incidents “generally behave [that way]... anyway” (‘Jim’, interview) is a plausible argument.

In support of this notion, it is significant to note that, in Pete's discussion of his peer group, he acknowledged that one reason the “*lads*” use steroids is so that, when on “*nights out*”, “*should two alpha males clash you can handle it, you can have a fight*” (‘Pete’, interview; chapter four). Pete's friends anticipate fighting when they are out drinking, and thus utilise steroids to help them handle such situations, rather than the situations being directly caused by their use of PIEDs. Asked whether steroids cause

violence, Pete dismissed the idea that his friends are getting into fights because of their use, as opposed to the reverse situation, as described above: “*it's that whole stigma around it... 'roid rage'*”, “[it's] *a lot of scaremongering... the lads that have taken it, haven't had the side-effects, are like 'well it's all bollocks... there's nothing wrong with us'*” (‘Pete’, interview).

In Pete's opinion, although his friends fight on nights out, this has nothing to do with 'roid rage', and he has not noticed an increase in aggression in those friends who use, nor have they reported feeling any different. The increased size conferred by steroids might make them more confident in their ability to fight (chapter four), but as far as Pete is concerned, the drugs themselves do nothing to actually increase aggression in this manner: “[You] *might get more aggressive in the gym, towards yourself, towards lifting the weights... [but not towards other people]*” (‘Pete’, interview). Interestingly, Monaghan (2002*i*) supports the suggestion that such thinking fuels a lot of steroid use in young men who are likely to be in situations where fighting may occur, and this is further supported by reports of police officers and firefighters who use PIEDs to give them an edge in frontline situations (Turvey and Crowder 2015), suggesting the causal link identified in much of the media is in fact the reverse of the true situation. As powerlifter Rich summarises the essential point: “*If you're the kind of guy who... likes to start fights, being bigger's gonna help you, isn't it?*” (‘Rich’, interview).

Even amongst those on the fringes of PIED-using subcultures, who might otherwise accept the idea of 'roid rage' as a legitimate medical phenomenon (below), there was acknowledgement that an individual's prior disposition might be a greater contributing factor than the substances themselves, with physiotherapist Robert noting that, in his view, a lot of steroid use has “*a lot to do with insecurities*” (‘Robert’, interview), with those who were previously bullied, or otherwise unsure of themselves, taking steroids as a means of gaining the confidence to stand up to others, which may lead to aggressive outbursts once these individuals acquire sufficient size, and self-confidence. Gym owner Stephen likewise noted how, in spite of his belief that “roid rage” is indeed a legitimate phenomenon, he nonetheless believed a lot of incidents involving steroid users were fuelled by the reality that “*a lot of young men... use steroids because... they are scared... and they feel like if they take those steroids and look bigger, that is an intimidatory factor to other males*” (‘Stephen’, interview).

These quotes suggest that a simple narrative of “steroids cause violence” might overlook many of the contributing factors in supposed 'roid rage' incidents, and as Coomber (1999) notes, factors such as the “previous... disposition of the individual concerned”, and the “context in which the violence occurs” (p.115) cannot be ignored in any analysis of the phenomenon. As shall be discussed, respondents held differing opinions about the extent to which steroids might indeed cause or influence violence, with some not entirely subscribing to the popular subcultural notion that 'roid rage' is a “myth”, as Monaghan's (2001) subjects were inclined to believe (pp:159-174). As Rich articulated, however, it is necessary to view such discussions in the context of “*how much [violence] is... people taking the steroids and going mental, or... mental people are more likely to take steroids, if you know what I mean?*” (‘Rich’, interview). The following

sections shall therefore determine, with reference to relevant literature, the extent to which respondents believed 'roid rage' to be 'myth', reality, or somewhere between the two.

Steroids as an "Amplifier"

One 'middle ground' position between accepting the mainstream representation of 'roid rage', and rejecting the concept as 'myth', arose frequently in interview, in the suggestion that steroids act as an "*amplifier*". Eddie, the former marine who trained primarily for image, explained this theory as follows: "*The [best] way I've found to describe any... form of steroid, is it's an amplifier. So if you've got an anger problem, it's gonna amplify it. If you've got something else, it's gonna amplify it*", "*So just be aware of who you are*" ('Eddie', interview). This mirrors comments in Monaghan (2001), where one explanation for the apparent phenomenon of aggression in steroid users was: "If you're a nice, laid back, easy going sort of bloke then I don't think you've got anything to worry about. I think it does exaggerate aggressiveness though if you're normally a bit like that. It just makes it a bit worse" ('Soccer' in Monaghan 2001:169).

There were several variations on this theme offered by respondents as explanation for the appearance of 'roid rage', and 'amplification' was often cited in concurrence with other theories to explain observed instances of aggression. Mariusz, for example, whilst attributing violence from steroid users to the fact that those involved are generally "*some dumb-fuck*" who would be violent regardless, nonetheless agreed the use of steroids can certainly exacerbate aggressive tendencies: "*It does change your mood a bit... it basically makes you more of who you are. If you're a total dick, it's not gonna make you a nice person. You're just gonna be an over-testosteronised, over-compensating dick*" ('Mariusz', interview).

This belief appeared to be held by the majority of respondents, with many agreeing that different people are affected differently by steroids, a concept explored or cited in much PIED-related literature (Pope *et al.* 2000*ii*; Monaghan 2001; Coomber 1999). Indeed, in perhaps the most rigorous investigation of the 'roid rage' phenomenon to date, Pope *et al.* (2000*ii*) found that mania and aggression increased only in a small subset of patients subjected to a six-week, high-dose testosterone-cypionate cycle, reinforcing the suggestion that such symptoms do not affect all individuals, only those predisposed towards certain reactions⁶⁴.

What is particularly interesting regarding the 'amplification' theory, however, is that it appears to have become a mainstream belief amongst those surveyed, notably being repeated both by those who had never used steroids, as well as some users who in fact disagreed with the suggestion, and cited it in the context of a popular myth. As noted previously, some respondents were familiar with academic arguments relating to PIED use, and the popularity of the 'amplifier' notion was a clear demonstration of this ethnographic diffusion of knowledge around the fringes of using subcultures.

Gym owner Stephen, for example, discussed possible reasons why certain individuals, in particular young male, 'hedonic-type' users, might be involved in aggressive incidents more frequently than sport-focussed users, who were regarded as no more prone to violence than the average person ('Stephen', interview; see Coomber 2013). Although a strong believer in 'roid rage' as a legitimate phenomenon, Stephen could not ignore the differences observed between these two categories of user, and so turned to the 'amplification' effect as partial explanation: "*In my experience... steroid use tends to make them more of what they already are... someone that's edgy, apprehensive, anxious, nervous, aggressive... I think steroid use makes them more. If they're someone that's calm, I think they stay pretty calm*" ('Stephen', interview).

Physiotherapist Robert, another non-using individual who nonetheless had frequent interactions with those involved in user subcultures, likewise cited the 'amplification' effect to explain the same observed phenomenon: "*If you're a very angry person, and you have that tendency, then it'll exaggerate it, but... if you haven't got it in you, it doesn't... create it*" ('Robert', interview). The belief of these two individuals in this 'amplification' effect is particularly striking, since both otherwise criticised young male 'hedonic' users for not being properly informed with regards to specific elements of use, which one might intuit could explain such negative reactions, without the need for an underlying stimulus of this type. Last chapter, for example, it was noted that Robert holds the individual responsible for side-effects such as depression, which can be mitigated by intelligent use, and it is therefore intriguing that he apparently does not apply the same standard to those who experience aggression, which he here attributes to underlying personality traits. This would suggest the notion of 'amplification' has attained a popular status amongst those interested in PIED abuse, even when it appears to run contrary to beliefs (such as personal responsibility in managing side-effects) voiced in regards to other areas of use.

The apparent popularity of the 'amplification' theory was perhaps best illustrated in the interview I conducted with powerlifter Rich, whose personal experiences with what he terms 'roid rage' shall be discussed below. Rich at one point cited a variation on the 'amplifier' effect when discussing 'roid rage', criticizing the concept, whilst simultaneously acknowledging its popularity amongst the users within the lifting subculture of which he is part: "[In] '*Bigger, Stronger, Faster*', what[is] it the guy says? '*If you're an asshole on steroids, I guarantee you were an asshole without the steroids*'... *I think a lot of these guys kind of try and downplay* ['roid rage' by saying this]" ('Rich', interview). As noted in previous chapters, many respondents, both members of using subcultures, and on the fringes, have watched the cited documentary, and it appears this may have influenced the way in which the mental effects of steroids are perceived, much in the way Robert (interview) explained the propagation of "myths" and "legends" amongst gym users in the previous chapter. Whilst accepting that the concept of 'amplification' surely existed prior to Monaghan's (2001) or Pope *et al.*'s (2000*ii*) reporting on it, it seems plausible that it has become so mainstream an opinion primarily owing to the cult nature of Bell's (2008*i*) documentary, across all elements of 'gym culture' ('Pete', interview), once more reinforcing the suggestion of an increasing "social acceptance" (Parker *et al.* 1998), indicative of normalisation.

As shall be shown, there are reasons to doubt the legitimacy of the 'amplification' effect, at least to the extent that it could be considered an 'all-encompassing' explanation for 'roid rage'. However, it is interesting nonetheless to note the prevalence of belief in this concept, particularly amongst non-users on the fringes of using subcultures ('Stephen'; 'Robert'), which again suggests something of a growing cultural acceptance of these drugs. Whilst the significance of the repetition of this theory is valuable in discussions relating to the 'normalisation' of PIEDs, many respondents nonetheless held differing opinions on the causes of variation in the likelihood of aggression between individuals, and across groups, some of which ran counter to the concept of 'amplification'. It is therefore necessary to explore the experiences of respondents further, in order to obtain a clearer understanding of the effects of steroids on aggression, and violent behaviour, from an ethnographic perspective. It is to direct experience of such events that this chapter shall therefore turn.

'Roid Rage' as a Real Phenomenon

As noted, although gym owner Stephen believed there to be some merit in the idea of 'amplification', he nonetheless rejected such claims as made by Coomber (1999) that suggestions of 'roid rage' could be grossly exaggerated, biasedly selected by the media (p.115), or a form of 'moral panic' (Coomber 2013). Although acknowledging certain types of person were more likely to be involved in aggressive or violent incidents using steroids (above), Stephen held that this alone could not wholly explain the phenomenon, and believed some chemical component, as suggested by the classic interpretation of 'roid rage', must exist: "*I've probably witnessed multiple, multiple examples of roid rage*", "*I've seen examples of people beating up their wife... tons of examples of actual bodily harm, grievous bodily harm... you know, domestic violence*" ('Stephen', interview).

Although as noted it could be difficult, if the phenomenon of 'roid rage' does in fact exist, to nonetheless distinguish between the types of individual who use steroid because they are already aggressive and wish to become bigger, and those who would otherwise be peaceful, but who 'snap' in a fit of 'roid rage', Stephen suggests it is possible to draw such a distinction in noting that, unlike fights that occur in pubs and clubs, which are potentially fuelled by young male bravado (Collins and Messerschmidt 1993; Pallone and Hennessey 1993), alcohol and stimulant intoxication (Fagan 1990; Barton and Husk 2012), and a culture of aggressive masculinity based on underlying insecurities (Bowker 1998; Krienert 2003), incidents where "*the people who suffer are the girlfriends, and the parents, and the friends*" ('Stephen', interview) can be more easily attributed to an individual who 'snaps' (Choi and Pope 1994), than examples of incidents involving those who "*may even work in that sort of industry of doorman, or something... where perhaps it's an advantage to be more aggressive*" ('Stephen', interview; see Monaghan 2002*i*), where the contribution of

steroid is perhaps less obvious.

Whilst Stephen's reasoning seems logical, an emphasis on the supposed phenomenon of 'roid rage' in the media could well have influenced his perception of events, as suggested by Mariusz (above), to the extent that situations which might otherwise be attributed to a statistical likelihood, such as observing incidences of domestic violence when running a business with thousands of clients, are instead attributed to the easily-recalled phenomenon to which he has been frequently exposed in reports (Kahneman 2012; Gardner 2009). Although it is naturally difficult to find data either supporting or disproving this notion, it is nonetheless significant that, in spite of Stephen's belief that steroids cause violent aggression in some individuals, he was wholly uncritical of the exact same drugs being used when prescribed by a doctor, believing "*steroid use can be very beneficial, in medicinal purposes*", including in relation to the administering of long-ester testosterone injections to patients receiving "*testosterone replacement treatment*" ('Stephen' interview; see Royal Berkshire NHS 2016:2; NHS.uk 2016), one of the 'androgenic'-type steroids most commonly associated with perceived incidents of 'roid rage' (Monaghan 2001:177).

Since Stephen does not believe that medically-prescribed testosterone causes or contributes to incidents of domestic violence, it therefore seems likely Stephen's perception of these drugs has been influenced by the fact that "the distinction between what is a good drug and what is a bad drug is largely a construction based upon muddy thinking and moral positioning around what is considered 'medication' and what is considered 'abuse'" (Coomber 1999:115-116). We therefore again see the stigmatisation of 'illicit' use of PIEDs, even alongside the acceptance of 'legal' use of the drugs, suggesting it is the 'illegal' nature of much gym-based use that is a stigmatised characteristic (Goffman 1963), with a 'labelling' (Becker 1963) of deviant users occurring which sees them as 'violent' or dangerous, thus spoils their identity, in spite of the drugs they consume being identical to the acceptable, medicinal drugs Stephen does not stigmatise.

Whilst Stephen might indeed be correct that an excessive use of testosterone, far above that which any doctor would prescribe, could cause an increase in aggression not observed in moderate doses (Hoberman 2006; Pope and Katz 1994), one wonders whether this can truly be attributed to a feature of the drugs, in the same way as Simon's refusal to take 'post-cycle therapy' drugs (chapter five) cannot be said to prove that 'cycling' steroids necessarily causes a year-long depression on cessation of use. Indeed, Monaghan (2001) addresses this point, with one respondent noting that, when talking about "abusers" using "one hundred... times the recommended dose", "a child of six knows that after taking that much there's going to be problems... do the same with aspirin or even throat lozenges and... you'd die" ('Soccer' in Monaghan 2001:165). Whether the negative events witnessed by Stephen could strictly be called 'roid rage' is therefore questionable, especially when one considers the dichotomy between his own beliefs with regards to 'underground' drugs, and their licit 'medicinal' counterparts (Coomber 1999).

Stephen was not, however, the only individual to observe incidents of so-called "roid rage", and indeed, it was not only those who abstained from use themselves, such as Stephen and Robert, who believed there

could be some truth to the phenomenon.

Powerlifter Rich, although dissenting from the traditional mainstream view of 'roid rage' in suggesting that some incidents might be better explained by those who are more inclined to fight having a powerful motivation to take substances that will make them bigger and tougher (an opinion supported by Pete's interview responses, above), nonetheless gave some credence to the suggestion that certain compounds could cause aggressive outbursts: "*There was a lot of steroid use in Dave's [Gym]... everyone was on it... And basically... I pissed someone off and... got in a bit of a... I would probably call it an assault, personally... he hit me*" ('Rich', interview). Although as Mariusz notes (above), it is possible that an individual could act in an overly angry or aggressive manner irrespective of the compounds they are taking, this incident, involving a competitive powerlifter, and not an individual training simply to look tougher (as suggested by Jim, interview), or a doorman (Monaghan 2002*i*), nonetheless made Rich somewhat less willing to believe 'roid rage' is merely a 'myth' than a number of his peers: "*I've had a guy, on steroids, actually fucking hit me. So obviously... I'm a bit more aware of it, I think, than a lot of these guys*" ('Rich', interview).

This incident, although undoubtedly unpleasant for Rich, does not of course prove anything, other than that competitive powerlifters are not above acting violently when "*pissed off*" ('Mariusz', interview). However, as Rich notes, this experience primarily contributed to his reformed view on 'roid rage' owing to its making him "*more aware*" of the possibility the phenomenon is in fact real, rather than simply accepting the popular subcultural view it is not. As such, when Rich experienced what he believed to be a 'roid rage' incident in himself, he did not attribute it, as Mariusz did, to "*just get[ting] pissed off*", but instead suspected an adverse reaction to the compounds he was using: "*I was shouting at my mate, I could see people looking at me like I was a fucking mentalist, and I thought to myself... 'yeah, that's the steroids', 'that's 'roid rage'", "Cos I don't think I would have done that without being on them... I'd say they had a bit of an effect on me, on aggression*" ('Rich', interview).

Naturally, Rich attributing his anger to "*roid rage*", as opposed to a personal predisposition to aggression, does not invalidate the theory of 'amplification', or indicate the conventional conception of 'roid rage' is valid. As one respondent in Monaghan (2001) suggests, some individuals "like to think they're being made aggressive" (p.166) to excuse their personal failings, and it could be argued that Rich's attributing his anger in this instance to the steroids is no more definitive for drawing a conclusion than Simon's blaming the compounds he took for symptoms most probably caused by his own failure to do PCT, as discussed in chapter five⁶⁵. It is interesting to note, however, that Rich uses an argument in favour of the traditional conception of 'roid rage' similar to that expressed in Monaghan (2001:166) to argue against it, a suggestion that dissenters hold their opinions because they wish to excuse culpability, or are attempting to shift blame away from a root cause: "*I guess [people who deny 'roid rage' exists] see it as like a personal attack on their sport, or something. You know, 'you're saying the drugs are dangerous, therefore you're saying powerlifting or bodybuilding or whatever is dangerous'*" ('Rich', interview).

Rich's argument that those who deny 'roid rage' is real do so because they are protecting their sport from negative public perception clearly has parallels with the suggestion that claims of 'roid rage' by users shifts blame away from oneself to avoid taking personal responsibility, and it is important to note that both arguments likely have some merit. Elsewhere in the literature, it is noted that bodybuilding in particular has garnered a certain degree of negative press over the years (Monaghan 2001;2002*ii*; Fussel 1991; Hotten 2004), with 'roid rage' being a particular focus of attack. Undoubtedly, those who are heavily-invested in the sport would have motivation to discredit such reports, as the existence of such a phenomenon naturally paints their sport in a negative light. Indeed, such attempts to downplay, and minimise harms that are perhaps exaggerated for political reasons, are seen to occur in other areas, such as in the debate on the harms of cannabis (compare the harms cited in Hitchens' (2012) polemic to the declarations in Harvey (2014), with reference to less partisan texts such as Nutt (2012), for example). There is little reason to suggest, therefore, that Rich's assertion that 'roid rage' is downplayed by those within using subcultures is any less credible than accusations by others that reports of 'roid rage' are exaggerated by those who use PIEDs and are naturally prone to aggression.

In response to the suggestion that those who are naturally aggressive simply seek to shift blame to the substances they take by blaming 'roid rage' (Monaghan 2001:166), it is notable that Rich did not only cite 'roid rage' to excuse his own actions, but noted that he had observed further incidents of 'roid rage' in others he believed to be ordinarily peaceable, a fact which potentially strengthens his view that the phenomenon is indeed legitimate, regardless of what other members of his subcultural group (powerlifters) might say to the contrary: "*even Jim... when he was doing like tren and halotestin... together... just... went mental on one of the guys in Dave's, and was screaming at him for like 10 minutes straight... that actually happened!*" ('Rich', interview).

The significance of the addendum here is that Rich is aware I personally know Jim, and am thus aware of how laid back he ordinarily is, and unlikely to ever be involved in a violent confrontation, let alone "scream" at someone for "*10 minutes straight*", thus prompting Rich to assure me that the incident "*actually happened*". Although I did not have particular reason to doubt Rich when he told me this, I nonetheless asked Jim about this incident at a later date, and he confirmed for me that he did indeed yell at a member in Dave's gym, who was apparently interrupting him mid-set with some request that could have waited, and threw off his workout ('Jim', personal correspondence 14.10.2016).

As Jim is both a high-level competitor (a former national powerlifting champion), and a chemistry graduate, it seems unlikely he would be 'abusing' steroids in the manner described in the quote from Monaghan (2001) above (i.e. using "100 times" the recommended dose), especially when one considers the context of his critiques of 'gym rats' who 'abuse' steroids, discussed previously. It therefore seems likely that, as opposed to the ordinarily calm Jim having abused an excessively high dose of these compounds, thus enhancing his aggression to a usually unseen level, there might indeed exist some phenomenon akin to 'roid rage'.

In suggesting 'roid rage' is a legitimate medical phenomenon, however, it is worth noting that Rich nonetheless appears to minimise the extent to which "steroids" are likely to influence such behaviour, suggesting through inference that it was the specific drugs involved, "*tren and halotestin... together*" ('Rich', interview), which provoked this reaction, as opposed to use of steroids more broadly, as a conventional interpretation of the phenomenon might argue. If this is the case, it could therefore perhaps be said that the phenomenon of 'roid rage' does indeed exist, but only in relation to specific compounds, or what Monaghan's respondents referred to as "the head case material" (Monaghan 2001:175).

Drug-Specific Anger / "The Head Case Material"

In the *Brotherhood of Iron*'s PIED advice manual, '*Advanced Chemical Warfare: Unlocking the Keys to Rapid Muscle Gains Using Anabolic Steroids*', the author informs readers that "as well as being dose dependant increased aggression can also be product dependant" (Stettler 2013:18). This view of 'roid rage' has apparently appeared in subcultural ethnopharmacologies for some time, with some respondents in Monaghan (2001) suggesting "that specific steroids, rather than steroids per se, are correlated with negative aggression and propensities to violence" (p.176). Indeed, numerous past accounts are careful to distinguish between 'hardcore' gear, and that which can be used with less concern (Duchaine 1989; Fussel 1991), and the belief that 'roid rage' might therefore be attributable to "specific steroids" (Monaghan 2001:176), and not the use of steroids more broadly, has been prevalent within using subcultures for some time, even if such a distinction is not made in media reports of 'roid rage' incidents (for example Sydney Morning Herald 10.01.2014).

As such, an ethnopharmacological view of compounds has been established (Monaghan 2001; Stettler 2013), which suggests that 'roid rage' could more accurately be termed 'tren rage', or 'halotestin rage', dependent upon the drug involved, owing to the very specific group of compounds that cause this side-effect, as opposed to the more common attribution to 'steroids' generally. Indeed, within certain communities, such labels are apparently already employed, with the term 'tren rage' appearing on the Steroids.com (2006) forums, ThinkSteroids.com (2004), and EliteFitness.com (2001), amongst others⁶⁶. This assertion amongst users that 'roid rage' is only a side-effect of a limited number of 'hardcore' steroids was acknowledged by several respondents, and indicates that much of the disagreement over the existence of 'roid rage' is largely semantic.

Robert, for example, was a believer in the 'roid rage' phenomenon in those who were predisposed to anger, or insecurity (above). As evidence that 'roid rage' was not simply a 'myth', or a product of violence-prone young males starting fights and claiming their steroid use was responsible, Robert cited a conversation with a competitive bodybuilder, which he recalled as follows: "[he] said that tren basically

makes him want to punch people... He takes tren, and then if someone says 'good morning' he wants to hit them. [Laughs] Which is interesting... he's the one who said 'anyone who says it doesn't make you angry, that it doesn't affect your mood, is completely lying'" ('Robert', interview). In this instance, the bodybuilder has identified a specific compound (trenbolone-acetate) that causes these symptoms in him, and not simply 'steroids' in general. Robert, however, feels this is sufficient to evidence that 'roid rage', although dependent on the individual's personality, is a real phenomenon ('Robert', interview).

Contrast this with Jim, who stated categorically that he believed 'roid rage' to be a "*myth*" ('Jim', interview), yet also admitted that he had experienced an increase in aggression when using a cycle that contained two of these potent 'headcase' drugs, one of which was the same drug identified by Robert's bodybuilder friend (see Rich's comments, above). Likewise Mariusz, who similarly felt that 'roid rage' incidents were often caused by factors other than the steroids involved, nonetheless noted how "*I've done DBol... and I hated it... that was the only one that affected my mood, actually. It turned me into a dick*" ('Mariusz', interview). Indeed, in spite of stating that he felt the number of individuals who experienced 'roid rage' was "*statistically... such a small... number*", 'Mariusz' nonetheless fully anticipated feeling more aggressive when trying certain compounds, those 'hardcore' drugs termed 'androgenics' in Monaghan's (2001:98) research: "*I did try tren, despite the fact that like every single story I ever heard about it was a horror story, like 'Oh no, it's gonna turn you into an arsehole!', and... I was fine*" ('Mariusz', interview).

Clearly, Mariusz does not doubt the capacity for certain compounds to change one's mood, and potentially increase aggression, based on the individual's personal characteristics. It could therefore be suggested that his discounting of 'roid rage' as a phenomenon relates solely to those who do not 'abuse' these drugs, and that he tacitly acknowledges the type of person who gets into violent confrontations when using these 'headcase' compounds may indeed have increased aggression owing to their 'abuse' of these steroids. This helps highlight a certain confusion in the literature, which seems to account for some of the conflicting beliefs cited by various respondents in the course of this research: the actual definition of 'roid rage' is not set.

Coomber (1999), for example, suggests that 'roid rage' should be considered in the context of violent *actions*, as opposed to mere feelings, since these are measurable, and such an approach ultimately allows for contextually significant actions, such as a user's compensating for increased feelings of aggression, to be accounted for, as in the context of other drugs (Coomber 1999:115; see Fagan 1990; Potter 1989). Monaghan (2001) meanwhile uses a definition which counts any form of "negative aggression", but simultaneously notes that "aggression", in the context of a mental state that allows one to train more intensely must be separated from this definition, even if they might be near indistinguishable when ignoring actions (Monaghan 2001:162).

Indeed, it is clear that this division between "aggression" and "violence" is a necessity when attempting to understand the phenomenon of 'roid rage', since "aggressive behaviour is often a desired effect of AAS use"

(Trenton and Currier 2005). Pete, for example, who suggested that 'roid rage' is "*all bollocks*", as his friends "*haven't had the side-effects*" ('Pete', interview), simultaneously noted how "[You] *might get more aggressive in the gym*", but suggested that such aggression might actually lessen the chances of genuine violent confrontation, using the example of a friend, who: "[lifts] *a lot for stress relief, letting out anger... that's his release. That's how he lets go, is just by lifting weights. Lifting big, sort of punishing himself, really*" ('Pete', interview). It is therefore interesting to note the statistic cited in Bates and McVeigh's (2016) research into PIED use, which records that some 53% more individuals surveyed stated they were affected by "*mood swings*" than "*aggression*" (26 to 17) (p.8), suggesting some individuals might not count what could perhaps be better termed "*anger*" or "*frustration*", as "*aggression*", meaning "*increased tendency towards violence*", perhaps a more commonly understood definition for 'roid rage' (Choi and Pope 1994; Choi *et al.* 1989), whereas others might state they experienced increased "*aggression*", meaning simply an ability to train with more intensity (Monaghan 2001), in such surveys.

In this context, it is therefore important to note that two of the three 'roid rage' incidents cited by Rich in support of the phenomenon (above) never produced actual violence, or indeed even the suggestion that he or Jim had considered acting in a violent manner. Both Rich and Jim became angry at another individual in the gym during training, and shouted at them, but neither man actually did anything to harm the other individual, and indeed simply continued to train afterwards, indicating that even these undoubtedly '*aggressive*' events were ultimately not considered overtly '*violent*' by those on the receiving end (who did not seek to have either man ejected from the gym as a consequence) ('Rich', interview). This naturally supports the '*amplifier*' notion that any violent tendency has to be "*already in you*", since both men were using '*headcase*' drugs, yet neither physically harmed anyone, as a conventional view of someone '*snapping*' from 'roid rage' might dictate (see Coomber 1999).

Using a definition of 'roid rage' that excludes this type of "*anger*" or "*frustration*", and focusses only on "*aggression*" that is "*violent*", it becomes clear than not one of the respondents in this study actually experienced such a symptom. Indeed, although some respondents claimed to have witnessed, or been the victim of such violence, these incidents, as discussed above, in no way refute the explanation that "*mental people are*" simply "*more likely to take steroids*" ('Rich', interview). Not one user reported an increase in violent tendencies, or thoughts, and none were personally involved in violent acts (including against property, as one individual in Monaghan's (2001) study reported ('Rod', p.168)). Indeed, gym user Simon actually claimed that steroids made him *less* violent, since he was now venting his frustration in the gym, as opposed to "*smashing*" things, or being abusive towards his girlfriend, as he once was: "[on steroids] *I never was a horrible cunt towards her like I was before I was on steroids*" ('Simon', interview). It therefore seems likely, with consideration to the limited evidence a study of this size can provide, that any definition of 'roid rage' suggesting steroids cause "*violence*", as opposed to an increased likelihood of "*aggression*", are indeed, as Coomber (1999) suggests, unsubstantiated in the context of this research.

The suggestion that certain steroids might increase "*aggression*", however, regardless of whether this

manifests itself as physical violence, leads to a further area of discussion, which is worth investigating in exploring respondents' beliefs and attitudes towards 'roid rage'. This is the measures taken by users to manage such symptoms, and thus minimise harms, and it is to a discussion of these methods that the chapter shall therefore turn.

Managing Symptoms and Minimising Harm

Although the "angry" incidents involving both Rich and Jim undoubtedly demonstrate some form of "increased negative aggression" (Monaghan 2001:162), in that their moods were altered so they were quicker to anger, the fact that both men acknowledged, and subsequently modified their behaviour based on these respective incidents ('Rich', interview), perhaps highlights the need, as Coomber (1999) suggests, to take into account "expectations of the user that steroids increase aggressive tendencies", and "choices available to the individual to avoid violence" (p.115). Coomber (1999) argues that an individual who feels 'short-tempered', but manages these feelings so they do not manifest as violence, cannot realistically be said to have suffered a bout of 'roid rage', as the term is conventionally understood (p.115). If users are aware that only certain, specific drugs are 'head case material' (Monaghan 2001:175), then they are more likely to take precautions to account for potential side-effects, as Mariusz did with regards to his commencing use of both trenbolone-acetate, and dianabol (above). As noted by Monaghan (2001), within the competitive bodybuilding community, "users plan and modify their steroid courses in order to minimise th[e] possibility" of negative aggression (p.177), suggesting any occurrence of 'roid rage' could therefore only arise through 'abuse' (Monaghan 2001:164-166), and not ordinary, subculturally-acceptable use of these compounds (chapter five).

In this sense, one might suggest that incidents of 'roid rage' therefore can never be entirely attributed to the drugs, but to "*abuse*" of them, owing to a lack of time invested in research prior to use, or lack of concern for the effects of such abuse, by the individuals involved. Although one must naturally avoid tautology in defining terms in this manner, such a theory of 'abuse' causing 'roid rage' in those who have not researched and planned for such symptoms would seem to support the suggestion, advanced by several respondents, of aggressive young males merely being careless, or unconcerned in their use, over claims that steroids inherently cause 'roid rage', supporting the analysis that 'hedonic' use, whilst becoming increasingly normalised, may simultaneously be impinging on broader "cultural acceptance" of PIEDs, through an increase in behaviours admonished by other user subcultures.

As Jim argued in his dismissal of the 'roid rage' phenomenon, many incidents attributed to 'roid rage' occur in a context where other drugs or alcohol are taken ('Jim', interview), and often these incidents are triggered by individuals who "*take... steroids to... look bigger, so they can go out to the pub, and pose in*

front of people, and... cause arguments" ('Jim', interview). As noted, Jim criticised media reports for ignoring the effects of alcohol and other drugs when reporting on such incidents, and Mariusz made similar comments regarding a newspaper's reporting of an assault outside a nightclub (cited above). It is interesting to consider here the broader position of alcohol consumption in the context of steroid use, discussed last chapter in relation to concerns surrounding hepatotoxicity. Whilst some avoidance of alcohol consumption during steroid cycles was due primarily to health concerns, other respondents avoided the drug primarily owing to fears of its propensity to increase aggression, which it was believed might be amplified through steroid use: "*Yeah, you're not meant to [drink whilst on steroids], cos obviously the aggression... and I don't neither*" ('Simon', interview).

A naturally fairly aggressive person (see above), Simon accounted for the reported increase in anger that steroid can have by taking preventative measures, specifically avoiding alcohol⁶⁷. Similarly Josh, although not concerned solely with effects such as aggression, nonetheless noted that he avoided alcohol, because "*alcohol... affects what you've taken*" ('Josh', interview), and he did not wish to potentiate any negative effects of the steroids, including aggression. Indeed, Josh noted he steered clear of all 'headcase' drugs out of similar concerns, stating "*As [for] trenbolone, testosterone [cypionate]... that's not for me, that. I'm more of a family man now, and at the end of the day... the children [come first]*" ('Josh', interview), suggesting he sought to minimise harm both by avoiding these stronger compounds, and remaining teetotal when using 'milder' steroids. Josh stated he was "*not at all*" affected by increases in aggression as a consequence ('Josh', interview), supporting Coomber's (1999) thesis of expectations of the user influencing choices, thus allowing users to avoid violence.

The actions of Josh and Simon indeed mirror the approaches of subcultural groups surveyed in previous research, specifically competitive bodybuilders, who have been observed as generally being teetotal in several qualitative studies (Monaghan 2001;2002*ii*; Fussel 1991; Hotten 2004). In contrast, Pete's friends, whom he noted were frequently involved in incidents where "*two alpha males clash*" ('Pete', interview), were described by Pete as being "*all about the banter... drinking beer...*" ('Pete', interview), and it is perhaps telling that these young men were the only known individuals reported to be involved in violent incidents whilst using steroids (with the exception of the assault on Rich; above). Although some previous studies of college-aged male steroid users (often collegiate athletes) have noted alcohol consumption levels either greater than, or equal to those of the population more broadly (Pope *et al.* 1988; Yesalis *et al.* 1993; Brower *et al.* 1993), Bates and McVeigh (2016) in contrast note that 60% of their respondents used alcohol either monthly, or less frequently (p.7), suggesting the broader user population today still drink at a lower rate than the general public. Since it was noted last chapter that Bates and McVeigh's respondents were largely image-oriented, this statistic indicates that "lad culture", although very visible (Martin 2015), might not be as prevalent as other image-oriented subcultures (such as the broader 'workout culture', 'Crossfit', etc.), and likely suggests these other using groups are being unfairly stigmatised as violent, given the evidence presented here.

The findings of this research are therefore generally in line with Monaghan's (2001) analyses, suggesting that although certain types of use and user will generate some increase in aggression, steroids are by no means a certain cause of violence. 'Roid rage' seems to be, as Coomber (1999;2013) suggests, another means of 'demonising' a stigmatised population, through the creation of a 'folk devil' of the violent bodybuilder (Monaghan 2002*ii*) or gym-goer, when in reality violence appears to correlate only with the minority that binge-drink alcohol, or are involved in hedonic night-time economy-related activities ('Pete', interview; Martin 2014).

The discussion of different user types' approach to alcohol, and the night-time economy (see Silverstone 2006; Barton and Husk 2012) brings up a parallel issue worth exploring in the context of stigmatisation and cultural acceptability: the use of other ('recreational') drugs by PIED users.

Use of Illicit Drugs

Although many competitive PIED users have historically been documented as abstaining from polydrug use, in a similar manner to the avoidance of alcohol (Coomber 1993;2013), drug use nonetheless has been a more prevalent factor in 'hardcore' communities than alcohol abuse, with members of bodybuilding communities in the past having utilised GHB to aid sleep and enhance recovery (George 1996; Volpi *et al.* 2000; Piana 2014), and the opiate 'nubain' to train longer through reducing pain (Assael 2007; Monaghan 2001). Although use of other 'recreational' drugs by those who take steroids appears to be a growing phenomenon (Bates and McVeigh 2016; Sagoe *et al.* 2015), likely linked with the burgeoning "lad culture" discussed above, and its culturally similar counterparts internationally (Martin 2014; Sydney Morning Herald 2014), even as early as 1993, DuRant *et al.* noted use of steroids frequently correlated with use of cocaine and marijuana in adolescents, suggesting many PIED-using groups have historically used non-performance-focussed drugs, albeit of different types, and for differing purposes.

Given the apparent rise in hedonic-type PIED users in recent years (Sydney Morning Herald 2014; Martin 2014; Olesker 2015), such as Pete's friends who have "*no issue putting stuff into their body*" ('Pete', interview), it seems hardly surprising there has been an apparent concomitant rise in polypharmacy with 'recreational' drugs amongst PIED users (Bates and McVeigh 2016; Sagoe *et al.* 2015), since the types of dedicated individuals studied by Coomber (1993) and Monaghan (2001), increasingly form a minority of users. Indeed, Bates and McVeigh's (2016) report into the habits of PIED users records that 24 percent of respondents had used cannabis in the previous year, and 22 percent Cocaine (Bates and McVeigh 2016:7), showing a significant prevalence of recreational drug use or trying amongst PIED users.

Given Parker *et al.*'s (2002) findings that 46 percent of respondents aged 22 had used cannabis in the year

prior to their study, and 16 percent cocaine (p.955), however, it is perhaps surprising that Bates and McVeigh's (2016) respondents, being primarily image-oriented in their use (p.4)⁶⁸, reported using cannabis at a significantly *lower* level than Parker *et al.*'s (2002) student respondents⁶⁹. Whilst this finding potentially suggests that use of recreational drugs by PIED users remains below levels observed in the youth population more broadly, thus reflecting the patterns identified by Coomber (2013) and Monaghan (2001), in spite of the shifting demographics of PIED users here identified, the over-representation of cocaine use might nonetheless indicate at least some cultural overlap between PIED use and cocaine use, possibly linked to the nightclub-oriented hedonic subcultures discussed previously (Martin 2014; see also Measham *et al.* 2001). Given other 'club drugs' such as MDMA and amphetamine were under-represented in Bates and McVeigh's sample (2016:7) in comparison to Parker *et al.*'s (2002:955), however, this apparent over-representation of cocaine use might be explained by a shift in availability of certain drugs (Taylor and Potter 2013; Barton 2011; Measham *et al.* 2001), with 'club drug' use amongst PIED users not therefore significantly different to the youth population as a whole. Whilst likely over-represented in certain 'hedonic' subcultures, therefore, 'club drug' use and PIED use do not seem to correlate on a population scale (Bates and McVeigh 2016).

It would therefore seem to be worth exploring the experiences of users in taking 'recreational' drugs, in order to determine qualitatively what the opinions and motives of use are within the different populations identified in this research. Whilst the use of Pete's 'hedonic' peer group has already been established, qualitative exploration of the use of 'recreational' drugs by those who abstain from alcohol, or train competitively, might offer more insight into the figures cited by Bates and McVeigh (2016), and further aid in understanding the overall context of PIED use, beyond the simplified assumptions one might make based on quantitative data alone.

Although polypharmacy with alcohol was seen as harmful by the majority of respondents who spoke on this issue (above), the converse appears to be true for cannabis, which was frequently utilised by respondents. Whilst some consumed cannabis primarily for recreational purposes, as would appear to be the suggestion in other studies finding polypharmic use (Sagoe *et al.* 2015; Bates and McVeigh 2016), others explicitly utilised the drug as a means of combatting stress, or reducing anger whilst 'on-cycle', essentially utilizing cannabis as a steroid accessory drug: "*I smoke weed occasionally. Just relaxes, chills me out. Hard day at work? Extra mellow*" ('Eddie', interview).

Such a finding is not unique to this research, even when looking specifically at competition-oriented individuals. For example, in *Advanced Chemical Warfare*, Stettler's recommendation for handling aggression whilst on-cycle is "smoking a joint the size of a cricket ball" (Stettler 2013:18), suggesting many in competitive-user communities utilise the drug in this manner. This suggests the quantitative data from longitudinal studies regarding the use of cannabis by PIED users might not merely reflect hedonic use, but

could more accurately be compared to the use of GHB by bodybuilders in the early 90s (George 1996), thus indicating that cannabis might be considered a 'performance enhancer' by those utilizing it, as opposed to a 'recreational' drug, as cocaine or MDMA undoubtedly are. Indeed, even amongst users who are adamant about not taking other recreational drugs, or drinking alcohol, the perceived positive effects of cannabis appeared to make it an acceptable substance to use.

Mariusz, for example, stated that he "*Stopped drinking... stopped doing drugs completely*" ('Mariusz', interview) prior to getting involved in wrestling training, because he believed these were harmful practices, especially in the context of steroid use: "[Steroid users who] *get drunk and do fucking coke [are] asking for a heart attack, basically*" ('Mariusz', interview). However, Mariusz noted he "*occasionally smoke[s] weed*", as he does not regard cannabis as being harmful in the same manner as alcohol or 'club drugs' ('Mariusz', interview). Indeed, Mariusz used cannabis in place of taking opioid painkillers, as many of his wrestling partners did, stating that he "*make[s] a point of not taking painkillers*", having witnessed first-hand how destructive they can be, and therefore sees cannabis as a viable, harmless alternative ('Mariusz', interview).

Likewise Rose, who as noted earlier was in severe pain owing to her medical condition, utilised cannabis in addition to human growth hormone, as she reasoned her prescribed painkillers were more harmful than either: "*I was just not up for becoming a government-sponsored smack-head*" ('Rose', interview). In both instances, cannabis and PIEDs were seen as a means of avoiding harder drugs, a fact not immediately apparent from simple statistical analyses (and running directly counter to the 'gateway drug' narrative once favoured in mainstream reporting (Hall and Lynskey 2005)).

Indeed, there is a growing mainstream acceptance of cannabis use for pain-reduction in sport-focussed subcultures, with UFC fighter Nate Diaz notoriously openly vaping 'CBD' (cannabidiol) at a post-fight press conference in August 2016, informing reporters the drug "helps with the healing process... make[s] your life a better place" (UFC 21.08.2016). Similarly, UFC colour-commentator Joe Rogan has spoken of the benefits of the drug for fighters and other sportsmen as an alternative to conventional painkillers, on a podcast with over 420,000 views on YouTube alone⁷⁰ (Rogan 2017*ii*), and I heard several people discussing the drug during my time in the field, both at BJJ classes, and in the gym. With the MHRA banning CBD for sale in the UK in October 2016 (MHRA 2016), however, it seems probable that those who were using CBD at the time of data collection will revert to using non-refined cannabis instead.

Cannabis was additionally utilised for performance-related purposes other than pain reduction, or making oneself "*mellow*" ('Eddie', interview) when on-cycle. Being somewhat timid on the subject during his recorded interview, Jim responded when asked if he used any drugs other than PIEDs that he often utilised "*stuff... to help myself sleep*" ('Jim', interview). As mentioned last chapter, insomnia was a side-effect of steroid use that several respondents experienced, and as Stettler (2013) notes, this might contribute to the reputation of steroids as making users angry, since "*lack of sleep can make you irritable and this can lead to increased aggression*" (Stettler 2013:18). The "*stuff*" to which Jim alluded, later confirmed as being large

quantities of cannabis ('Jim', personal correspondence 16.06.2016), was therefore both a performance-enhancer in the manner of bodybuilders' use of GHB (George 1996; Piana 2014), as well as a means of minimizing harms from side-effects such as insomnia, and 'roid rage', again suggesting the efficacy of cannabis as a 'steroid accessory drug'.

Indeed, in addition to helping him sleep, and off-setting other side-effects of steroid use, Jim enthusiastically espoused the benefits of cannabis use for performance and health, noting that since starting using the drug, he had lost some 25kg of bodyfat, as he was no longer stress-eating (personal correspondence 16.06.2016), greatly benefiting him in a sport divided into weight classes, and undoubtedly improving his general health in the process. Jim therefore utilised cannabis not only to minimise the harms of steroids, but also as a PIED in its own right, to the point where he confessed to having continued using it 'off-cycle' ('Jim', personal correspondence 16.06.2016), despite initially using the drug specifically to manage symptoms (insomnia) produced by his steroid use.

Indeed, use of cannabis was widespread across all user subcultures, and whilst some used simply for recreational purposes, owing to the drug being so normalised in the culture at large ("I think they were just surf dudes, really, and they were just into that anyway" ('Stephen', interview)), many espoused its performance-enhancing effects. Similarly Rich, who only utilised cannabis for the purposes of "having a social, kind of thing", wherein the use "wasn't anything to do with the steroids" ('Rich', interview), nonetheless utilised other depressive drugs for their performance benefits, in the same manner as Jim used cannabis: "I was taking... diazepam – Valium – for... obviously the insomnia" ('Rich', interview).

The subject of diazepam came up in four separate discussions with respondents, varying from Johnny's recreational use of the drug (field diary 08.06.2015), to Jim's using the drug whilst on 'head case' drugs to minimise the increased feelings of anger and stress ('Jim', interview). What is particularly notable in Rich's case, however, is that in interview he acknowledged, apparently only realizing it for the first time, that the drug might have had a positive effect on him separate to the sleep enhancement he was seeking: "I mean, I was saying about I wasn't angry all the time... there was only that one time where I thought 'yeah actually, I've gone proper roid-ragey there'... it might have just been because I had, you know, enough Valium in my system that it calmed me down throughout the day" ('Rich', interview). This is interesting, since Jim acknowledges that he used the drug specifically for this purpose, as did many of his peers in the 'hardcore' powerlifting gym in which he trained ('Jim', interview), again coming back to Coomber's (1999:115) argument regarding the managing of side-effects of steroids. Given diazepam's dual-purpose use as both a hypnotic, and sedative, it could therefore be useful if future longitudinal studies, such as Bates and McVeigh's (2016) asked about the prevalence of use of this drug (or more generally 'benzodiazepines'), in addition to the standard list of common recreational drugs⁷¹, although naturally this would also encompass 'recreational' users of the drug, such as Johnny (who used the drug to minimise negative side-effects "when you come off MDMA" (field diary 08.06.2015)).

These two drugs appeared to be the only 'recreational drugs' frequently utilised by competitive users (including image-focussed respondents such as Eddie), with any discussion of 'harder' drugs such as cocaine by respondents in this category being made in reference to others' use of these drugs, or their own use prior to beginning training, with not one competitive respondent admitting to taking such drugs in the time they had been on PIEDs. Use of 'harder' drugs whilst on PIEDs, or even when involved in dedicated training, therefore seems largely limited to hedonically-using individuals.

As noted previously, Pete's entire friendship group were engaged in taking "*MDMA, cocaine, anything... ketamine*" as part of their nightlife-focussed leisure activities ('Pete', interview), and several competition-focussed users, including Jim and Mariusz, knew people involved in an hedonic subculture who used "*other drugs*" such as cocaine. This polydrug use is believed to have contributed in-part to the apparent correlation between steroid use and violence (above), suggesting a fairly high prevalence amongst these 'hedonic users' (as suggested through comparison to Bates and McVeigh's (2016) findings, above).

Additionally, there was some correlation observed between the supply of PIEDs, and supply of recreational drugs. Martin, for example, noted he knew a cocaine supplier who sold steroids to doormen in the city ('Martin', interview), and indeed Simon actually bought his PIEDs through a "drug dealer" ('Simon', interview), suggesting some market overlap (chapter three). Indeed, having trained in several gyms locally and met a few of these individuals, I was personally aware of some degree of overlap between steroid supply and supply of recreational drugs. One individual whom I had hoped to interview about his importation and supply of steroids, for example, was actually imprisoned for selling cocaine during the data collection stage of this research, whilst PIED supplier Tyson admitted in our interview that he had consciously moved from selling cocaine and ketamine to the supply of steroids to reduce his risk of law enforcement exposure, after becoming aware of the market possibilities ('Tyson', field interview). Indeed Tyson, although no longer selling the drug, still used ketamine, as a steroid user training for image (a fact relayed to me by his friend Harry following our interview ('Harry', field interview)). These findings serve as a useful indication that, although not necessarily reflected in the usage patterns of the respondents themselves, who were mostly 'dedicated' rather than 'social' users of PIEDs (chapter five), there was nonetheless a strong awareness of links between PIED use and supply, and 'hard' drugs, thus supporting and explaining qualitatively the findings of Bates and McVeigh's (2016) quantitative report (22 percent prevalence of cocaine use in the previous year; p.7).

Polydrug use can therefore be said to be a present factor in PIED-using communities, though with the caveat that in sport-oriented communities this was generally either performance-focussed, or enacted to help manage side-effects of the PIEDs themselves (see Monaghan 2001; Stettler 2013; Yates in Rogan 2017*iii*). Cannabis use appears to be 'normalised' in both the competitive and image-focussed categories of user, much as Parker *et al.* (1998;2002) found for the youth population as a whole, and indeed was seen as

being far more culturally acceptable than alcohol use, which was frequently condemned by non-hedonic users (as Monaghan (2001) and Coomber (2013) also document). Although use of 'hard drugs' amongst PIED users was felt to be relatively prevalent by the majority of respondents, the number of individuals interviewed who admitted to using such drugs whilst on PIEDs themselves was low, with much of the information regarding this practice being second-hand. However, this likely simply reflects my better standing in the competitive powerlifting community compared to hedonic user communities, since few hedonic-type users – those suggested as forming the majority of 'hard drug' users – would agree to be interviewed by myself. Whilst this shortcoming is acknowledged, it is believed the inferences made from the qualitative interview data are nonetheless likely to be accurate, since the respondents' observations so closely accord with Bates and McVeigh's (2016) longitudinal findings, as the above analysis demonstrates.

The clear divisions observed between categories of user in their approach to PIED use therefore appears to extend to the consumption of other drugs as well, as one might expect. Further research, along the lines of Bates and McVeigh's (2016) longitudinal study, might therefore benefit from dividing user types in the manner applied in this research, as this would give a more accurate picture of use, much as dividing drug users by age helped in Parker *et al.*'s (1998;2002) study. This could potentially be a direction for future research, as it would undoubtedly lead to greater understanding, and therefore assist in the formation of more suitable policy responses.

Chapter Conclusion

Clearly, there is still some degree of stigmatisation of users, with several individuals from both principal user categories wishing to conceal their use from others, for fear of negative impact on their social identity if it were discovered. In the most severe cases, such as those addressed at the end of the previous chapter, this fear of stigmatisation can cause real harm to users, and therefore is important to address when developing policy.

The effect of this stigmatisation, principally caused by the perception that steroids cause violent, aggressive outbursts in users, might be acting to prevent a broader normalisation of use, since steroids will not become entirely 'culturally acceptable' whilst the image of the "roid head" persists. With several users cogently arguing why they believe "roid rage" to be a myth, and suggesting they have been able to convince friends and relatives of this fact, however, it seems there is some diffusion of this subcultural knowledge to those on the fringes of such groups, much as Parker *et al.* (1998;2002) found for cannabis users, who often were able to convince parents and friends of which perceived facets of use were true, and which were myth. This reflects Goffman's (1963) identified rules for handling 'normals', and the ways in which stigmatised individuals can reduce the harm stigma causes to their social identity, suggesting that the

management of spoiled identity is a focus of many PIED users.

With competitive users being overwhelmingly employed, educated, and aside from their drug use law-abiding, it is perhaps unsurprising that most criticism heard in the media today focusses on individuals who use hedonically, such as the two men cited in the newspaper report decried by Mariusz (above). However, with PIED users spreading their message that the drugs are safe, and do not cause violence – primarily it seems through the sharing of Chris Bell's (2008*i*) documentary '*Bigger, Stronger, Faster**' – one wonders whether the problems associated with this subculture will be increasingly seen as a side-effect of its relation to binge-drinking culture, and not image-focussed weight training culture.

With cannabis use largely normalised, and users no longer seen as 'deviant', it seems highly likely that, with the increasing use of PIEDs witnessed today, these substances could well follow a similar pattern, as several respondents, including non-users, noted (chapter three). In this case, such a normalisation might reduce the stigma felt by users, thus helping to combat the types of medical issues documented at the end of last chapter. It is clear, therefore, that whilst full cultural acceptance of PIEDs has not yet been achieved, the perception is that opinion is shifting in such a direction, and this is likely to be of benefit for harm reduction, which shall become increasingly necessary if "*lad culture*" and hedonic use continue to grow without sufficient knowledge diffusion from elsewhere.

8 Thesis Conclusion

This chapter will offer a conclusion to the research findings presented in this thesis, which shall begin with a summary of the key findings of the research, with reference to the research questions, posed in the introduction. The chapter will then move on to discuss the merits of the methodological approach adopted in the course of this thesis, which shall be followed by a discussion of original contributions to knowledge. Finally, there will be a discussion of future areas for research, with reference to some of the limitations of the present work.

Summary of Research Findings

This section shall provide a summary of the findings of the research, with reference to the questions this thesis sought to answer regarding: the context of PIED use in local gym environments; changes to the manner in which PIEDs are used, with the broadening of acceptance beyond competitive subcultures; the extent to which Parker *et al.*'s (1998) 'normalisation' thesis is applicable to the use of PIEDs today; and the extent to which 'cultural acceptance' is affected by a perceived 'stigma' towards PIEDs, and their users. These shall be addressed by first summarising findings as relate to the three key user categories identified in the research: sport-oriented, image-oriented, and hedonic; which shall be followed by a summary of findings regarding 'normalisation' and 'stigma'.

User Categories: Behaviours, Beliefs, and Change

This thesis adopted a 'grounded theory' (Glaser and Strauss 1967) approach that allowed for differing types of PIED user to be categorised, in a manner which inherently reflects the 'realities' witnessed in local gym environments. Through this approach, the research was able to broadly identify three categories of user, into which the various subcultures observed in gym environments can be sorted: sport-oriented, image-oriented, and hedonic users. These categories were observed to have distinct properties which influenced their use of PIEDs, providing a framework through which 'normalisation' (Parker *et al.* 1998) can be better understood, and public policy formulated. It is therefore worth summarising the findings of this work with reference to each of these categories.

Sport-Oriented Users

It was shown that sport-oriented users tend to make the decision to commence using PIEDs based on a number of factors (chapter four), the primary factor being a desire to become or remain competitive in their chosen sport. Although competing in “drug free” sporting federations (with data collection limited to such athletes), the desire to become competitive was nonetheless framed by perceptions of ‘ethics’ of use, with clear subcultural “rules” identified that reflect the strong ‘discipline’ (Foucault 1975) which reinforces ‘norms’ of use within this user category. Although there is variation across subcultures, sport-oriented users tend to spend a longer period both training, and researching drugs before commencing use, in comparison to other categories of user (chapter five). This norm of not commencing use of PIEDs until a sufficient level had been achieved in one’s sport is linked to the ‘discipline’ of informed use within this category, where “abusers” are strongly criticised.

Whilst some degree of ‘peer influence’ was present for sport-oriented users, this mostly arose because proximity to PIED-using competitors made clear to respondents the extent to which PIEDs could enhance performance, and give them a competitive edge, whilst also invariably increasing their ‘access’ to PIEDs (Parker *et al.* 1998). In combination with the perceived health benefits of sensible PIED use in treating injuries, and the potential financial benefits an increase in performance might accrue, these accounted for the principle reasons sportsmen gave for their use of PIEDs.

Whilst primarily motivated by long-term, practical factors in their decision to commence using, however, it must be acknowledged that some sport-oriented respondents also noted they were motivated in part by the increased female attention that came with having a PIED-enhanced body (‘Rich’, interview), which must therefore be considered a secondary motivation for PIED use in this group. This can be linked to the ‘historically dominant’ (Connell 1995; Gruneau and Whitson 1993) or ‘orthodox’ (Anderson 2009) conception of masculinity broadly exhibited by sportsmen (although conceptions across subcultures are diverse (Monaghan 2001; Monaghan and Atkinson 2014)), which influences subcultural norms, including attitudes towards drug use. In this way, despite sportsmen being largely distinct from image-oriented categories of user, they nonetheless can be identified as motivated in some way by exaggerated conceptions of masculinity, and driven by ‘masculine’ status.

Sport-oriented users had an in-depth approach to learning to use PIEDs (chapter five), which can be understood through subcultural theories of learning, in addition to the Foucaultian (1975) discipline referenced above. Sport-focussed subcultures were fairly uniform in their cultural norms, and despite these being to some extent oppositional to ‘mainstream’ culture (chapter seven), this created a subcultural

environment that was ‘unchaotic’ (cf. Burgess 1923), and encouraged strict cultural transmission (Shaw and McKay 1942), and ‘initiation’ through behavioural matching, and ‘becoming’ (Young 1971). With reference to influences such as ‘peer preference’ (Coggins and McKeller 1994) and ‘control theories’ (Hirschi 1969), it was shown that this process encouraged sportsmen to conduct in-depth research, and experimentation, to ensure they used in an informed manner.

Although sport-oriented subcultures had “abusers”, such as Stavros, it is clear their ‘norms’ created a cultural environment where drug use broadly was more informed, and thus safer, than for other user categories. By blending subcultural ethnopharmacological knowledge (Monaghan 2001) with up-to-date online ethnopharmacologies, viewed critically with reference to more academic sources, sport-oriented users were highly informed on processes of use, including such facts as the chemical ‘half-lives’ of drugs, and planned for long-term, safe use. Combined with measured experimentation, this created an environment where few sportsmen experienced serious harm from the drug use itself, with powerlifter Rich being the only sportsman to experience negative effects from PIED use comparable to harms which appeared ‘normal’ amongst hedonic users, and occurred with some frequency amongst other image-oriented user groups (chapter six).

Despite broadly avoiding alcohol, and stimulant drugs (though frequently claiming beneficial effects for cannabis), and paying attention to their general health, sport-oriented users nonetheless attached a similar ‘stigma’ (Goffman 1963) to the medical profession and doctors to that observed more broadly in the literature (Monaghan 1999; Simmonds and Coomber 2009), suggesting that although more cautious than other user categories, sport-oriented individuals still engage in ‘risky’ use of these drugs, often ignoring side-effects that are not visually detectable, a criticism noted by Llewellyn (2011). This suggests ‘stigma’, both towards PIED users, and directed from PIED users towards doctors and other harm minimisation agents (Simmonds and Coomber 2009), will be a significant area for focus in future research (see below).

Image-Oriented Users

In contrast, image-oriented users tended to have more diverse motivations for PIED use than sportsmen, which resulted in a differing approach from the ‘disciplined’, convention-bound use of sporting subcultures. Image-oriented individuals often used PIEDs owing to feelings of insecurity, and a desire to look or feel a certain way, which although observed for some sport-oriented individuals, such as the competitive bodybuilder whose father had “wasted away” from cancer (‘Robert’, interview), was not voiced as a primary motivation for use amongst sportsmen in the way it was for image-oriented respondents, of whom many listed such motivations.

Whilst there was some overlap with the purposeful use of sportsmen observed amongst doormen, who

might use PIEDs to give them a strength or size advantage over those they interact with in their work (Monaghan 2002; Monaghan and Atkinson 2014), image-oriented users were broadly more influenced by peers and media in the decision to go on PIEDs than sport-oriented respondents, and often commenced use at a much earlier stage in training as a result, with some commencing PIED use within just weeks of beginning training. Although the changing economy, fuelled by the expansion of the internet, has allowed for a number of professions to emerge which can encourage image-oriented PIED use for financial reasons, this was broadly a secondary motivation for those already involved in cultures of PIED use and training, although the impact of the growing visibility of ‘fitness models’ and social media personalities was noted as having a significant effect on young people who interacted with these, particularly amongst ‘hedonic trainers’, discussed below.

Non-hedonic image-focussed trainers broadly learnt to use PIEDs through either the internet, or acquaintances in their local gym environment, including hired personal trainers (chapter five). Whilst the combining of independent online learning with local sources to some extent reflected the methods of sportsmen, image-focussed users did not approach this learning with the same depth, or meticulousness, as their sporting counterparts. Image-oriented users might simply “*type in questions*” in a search engine, and read the top responses (‘Simon’, interview), or else simply follow the instructions and recommendations of a personal trainer, believing them to be an authority (‘Josh’, interview), invariably acquiring a lower level of understanding than offered by the in-depth approach that was culturally reinforced amongst sportsmen.

Whilst some image-focussed users, such as former marine Eddie, were comparable to sportsmen in their approach to PIEDs, this was noted as occurring *in spite of* their subcultural environment, with Eddie (interview) stating he was more cautious and measured in his use than peers in his local gym, whom he was aware frequently used PIEDs at “*three times*” the dose he did, suggesting what was a ‘norm’ for sportsmen reflects ‘cautious’ and intelligent use amongst image-focussed trainers. Whilst some overlap existed between user categories in their approach to use, therefore, the heuristic of dividing users in this manner is clearly effective in broad analyses of group behaviours and actions, appropriate for the purposes of this research, and applicable for public policy efforts (below).

The longer-term use (chapter six) of image-focussed trainers was more diverse than observed for sport-oriented users, but broadly followed many of this group’s requirements for ‘sensible’ drug use. Although generally using in higher doses, image-oriented users nonetheless were broadly aware of phenomena such as ‘stacking’, and ‘cycling off’ steroids to avoid harms associated with prolonged use at high dosages, with those who were unaware of such processes often corrected by fellow trainers, as in the case of Simon instructing a friend to “*come off*” testosterone, after using the drug for an excessively long period. Whilst use is spreading beyond the competitive subcultures previously associated with PIED consumption, therefore, it appears many of the protocols for ‘correct’ use are also expanding beyond these groups, with image-oriented trainers today reflecting the ethno-pharmacologies of bodybuilders from two decades ago (Evans 1997; Monaghan 2001). Whilst using drugs that are seen as “risky” by sportsmen, therefore, image-

oriented users nonetheless broadly followed this group's requirements for 'sensible' use, such as avoiding alcohol when 'on cycle'.

The primary area in which the ethnopharmacology of image-oriented users differed to sport-oriented trainers was in the area of post-cycle therapy, with this "necessary" feature of use in sportsmen's ethnopharmacologies often neglected by image-oriented users. This occurred either through lack of knowledge, such as Josh not knowing 'anavar' was a steroid, or through a belief 'PCT' was "unnecessary", as occurred for Simon. This can be related to the greater diversity of norms, and chaotic cultural environment of 'commercial' gyms, in contrast to the 'hardcore' gyms sportsmen tend to inhabit, resulting in a 'mixing' of messages, rather than a strict, culturally-reinforced 'norm' of 'sensible' use (Burgess 1923; Sutherland 1947). Thus whilst Simon would be seen as an "abuser" by sport-oriented users, he considered himself informed enough to critique others whom he saw as "abusers" within his own, more 'chaotic' gym environment.

Hedonic Users

Whilst the motives of hedonic users often overlapped with those of other image-oriented users, there was a greater focus on sexual prowess, intimidation and hierarchy, and the influence of "social media culture" within this group. Whilst it is noted these behaviours tend to predominantly affect younger men, who might "grow out of" them (Measham *et al.* 2001), and transition to broader image-oriented use, as happened with gym-user Josh, it is clear that exaggerated conceptions of aggressive masculinity which glorify 'machismo' (Connell 1995; Herzfeld 1985), and a culturally-encouraged view of women as primarily sexual objects (Walter 2011; Gill 2011), strongly influenced by the rise of social media sites such as 'Instagram', and cultural icons such as 'Zyzz' (Underwood 2017; Olesker 2015), and 'Geordie Shore', led to image-focussed drug use with short temporal horizons, resulting in less-informed, and more risky behaviour than seen for other user categories.

Hedonic users broadly learnt to use PIEDs through friends, often those individuals who "socially supplied" their drugs. Whilst personal trainers were observed as a source of advice for members of the growing 'workout culture', providing overlap with other image-oriented user groups, within 'lad culture' there was a cultural norm of 'lads' suppling each other, and encouraging one another to use in certain ways, even when advised against doing so by more informed individuals (as in Pete's case). In part this can be linked to the 'machismo' of this subculture, and the idea that one might use drugs in a higher dose to prove one can "handle it" (Miller 2008; Courtenay 2000), however it is clear that hedonic trainers were broadly less cautious in their PIED use than other types of user.

Although still ‘cycling’ steroids, as classic ethnopharmacologies suggest is necessary (Evans 1997; Monaghan 2001), hedonic users often eschewed the requirements for ‘sensible’ use advocated by sportsmen, resulting in a situation where young men can be observed visibly “blowing up” and “shrinking” down in commercial gyms, since they do not “cycle off” steroids correctly (‘Big Steve’, interview). Whilst members of ‘workout culture’ might avoid alcohol whilst on steroids (Olesker 2015), within ‘lad culture’ the use of alcohol and drugs is as prevalent as steroid use itself, with little regard for polypharmic effects. The heart attacks of high-profile hedonic steroid users who also used alcohol and cocaine, such as ‘Zyzz’ (Underwood 2017) and Dan Bilzerian (Rogan 2016*ii*), indicates the risks associated with such behaviour, and with respondent ‘Pete’ noting that many of his friends had heart problems (including one suffering a heart attack) or other health concerns, yet continued to use these drugs (chapter six), the extremely high time-preference of this group, disregarding everything but looking good for social media, and being “*ripped*” for “*summer in Ibiza*” (‘Pete’, interview), illustrates some of the difficulty in encouraging safe use amongst this population, who eschew advice that is already provided for free in NSP (e.g. Kimergård and McVeigh 2014).

These findings illustrate the validity of the ‘grounded’ theory of user categories which emerged from the data in this research, and which can be refined into identifying principles that can be broadly applied in future research, and public policy endeavours (Glaser and Strauss 1967). This shall be addressed below in discussing the merits of the research methodology, and original contributions.

Normalisation and Stigma

Throughout the course of this thesis, findings regarding the identified user categories and their respective properties were related back to the framework of Parker *et al.*’s (1998) theory of drug ‘normalisation’, and it was demonstrated that this framework can be applied to PIED use today, indicating normalisation has occurred. The user categorisation which formed the main theoretical framework of the research, as detailed above, contributed to the exploration of ‘normalisation’ by offering insight into how access to PIEDs, social acceptability, and trying rates vary across differing user categories, and it is clear that, whilst use has been ‘normalised’ for some time within sport-oriented subcultures, the increase in image-oriented and hedonic use in recent years has fuelled much of the ‘normalisation’ of PIEDs in the broader culture, and more ‘commercial’ spaces.

With chapter one providing the necessary historical context to understand PIED use, and significance of changing conceptions of masculinities in the normalisation of PIEDs, it is clear the evolving patterns of use, and attitudes towards use discussed throughout this thesis satisfy the requirements outlined by Parker *et al.* (1998) for ‘normalisation’, as laid out in overview in chapter three. The lone area in which some question was raised regarding the extent to which ‘normalisation’ has occurred was identified in the present findings

as relating to ‘cultural acceptability’ of PIED use, which informed discussion of the extent to which perceptions of ‘stigma’ towards PIED users exist, and their impact and potential implications.

Whilst the PIED-enhanced body, and PIED-associated subcultures are increasingly accepted by ‘mainstream’ culture, a number of respondents indicated that a ‘stigma’ (Goffman 1963) exists against PIED use, which arguably indicates they have yet to become ‘culturally accommodated’. Simmonds and Coomber (2009) identify this stigma as multi-directional, with PIED users both ‘stigmatised’, as well as ‘stigmatising’, in relation to their injecting drug use. This element of PIED users ‘stigmatising’ was present not only in the attitudes PIED users held towards “*smack head[s]*” (‘Rose’, interview) in this research, but additionally in the way they were ‘challenging medicine’ (Monaghan 1999), holding negative views of doctors, and NSP services. Despite Kimergård and McVeigh’s (2014) finding that PIED users are now the primary clients of NSP in many areas, the findings of this research made clear that a ‘stigma’ exists towards such services across all categories of PIED user, with many users refusing to visit these establishments, or doctors, for fear of being ‘labelled’ (Becker 1963). Although this finding might be exaggerated owing to socio-geographical concerns, with military service the highest aspiration of many young, working-class men in the South Devon area, which could be negatively affected should drug use be reported on medical records, there was nonetheless a broad perception of stigma in this area.

The supposed phenomenon of ‘roid rage’ further highlights perceptions of stigma amongst PIED-using populations, with many noting that they felt media, and even parents, were unfairly ‘demonising’ steroids. Chapter seven detailed these cultural perceptions, as well as perceptions of illicit drug use amongst PIED users, and suggested that although a stigma does exist towards users, particularly with regards to ‘roid rage’, there nonetheless appears to be a reduction in belief in this phenomenon since the time of Coomber’s (1999) explorations of the subject, and thus use is becoming more culturally accommodated. This reduction in the belief in ‘roid rage’ in part appears to have been caused by the deliberate management of stigma by PIED users, who through spreading the documentary ‘*Bigger, Stronger, Faster*’ (2008), and engaging in discourse with those seen as stigmatising them effectively manage their ‘spoiled identity’ (Goffman 1963), and therefore encourage accommodation (Parker *et al.* 1998). Although the behaviours of ‘lad culture’, and similar hedonic subcultures that combine steroid use with binge-drinking could infringe on this accommodation to some extent, as Martin’s (2014) article would suggest, Parker *et al.*’s (1998) requirements for normalisation nonetheless appear to have been satisfied, and this thesis provides an appropriate framework, in the form of its user categorisation, through which this can best be understood.

This summarises the findings of the research, and details how this thesis answered the research questions, posed in the introduction. This chapter shall now therefore turn to an analysis of the merits of the research, beginning with a discussion of the methodological approach of the thesis.

Merits of the Research Methodology

It is clear from the above summary of research findings that the methodology of this research provided an effective means of understanding the ‘real’ context in which the use of these drugs occurs. By adopting an in-depth, qualitative approach, involving researcher submersion, this thesis was able to add deep insight into the cultural atmosphere that surrounds PIED use, and really explore the motivations, beliefs and behaviours of users. Such qualitative methods have a long history of use in exploring ‘deviant’ subcultures (Hart 2010; Blackman 2010), and allowed for the use of narrative and voice (Merill and West 2009), which provided ‘thick description’ (Geertz 1973), through which the ‘realities’ and context of PIED use can be truly understood.

The ‘grounded theory’ (Glaser and Strauss 1967) approach to the collection, analysis, and presentation of data helped to achieve this process of providing a detailed, and deeply descriptive look at the culture and context in which use occurs, with the theoretical framework of the thesis evolving with data collection and constant comparative analysis, to provide findings which offer a view of the cultural context of the gym that is “inherently valid, verifiable and applicable” (Watson 2000:8). By presenting this theory in the ‘discussional manner’ (Glaser and Strauss 1967), the reader is able to “see and hear” findings “in the context of the theoretical framework” of the piece (p.228), which combines with the emphasis on narrative to offer the reader ‘thick description’ (Geertz 1973), and true *verstehen* (Ferrell *et al.* 2008:177) of the cultural context of the gym environments explored.

Accessing emotion and feeling, and performing ‘critical ventriloquy’ (Blackman 2016) further allowed for the ‘reality’ of the gym environment, and findings to be felt, and explored, in a manner intended to offer ‘live sociology’ (Back 2007;2012) to the cultural environment of the gym. By positioning myself, as researcher, within this work, and acknowledging the ‘subjectivity’ of experiences, this piece further offers insight into how I came to understand the cultural environment of the gym, and construct findings from this, following the feminist epistemological approach detailed by Stanley (1990), and Letherby (2000;2003). Combined with the grounded theory approach to the construction of findings, this again offers the audience deep description of how the theoretical framework of this piece was formed, providing the necessary reflection and understanding Glaser and Strauss (1967:230) suggest offer “greater credibility” to findings.

Along with a biographical and narrative-oriented, reflexive focus, it is hoped this work offers Blackman and Kempson’s (2016) “subcultural imagination” to the cultural environment of ‘the gym’, and the various subcultures which inhabit gym spaces, to offer understanding through which other studies in this field can subsequently be better understood, and explored. The merit of this approach was already demonstrated in this thesis in relation to the understanding it provides in exploring Parker *et al.*’s (1998) ‘normalisation’ thesis within PIED-using populations, and the methodology of this thesis offers strong contributions to

knowledge in this field more broadly.

Original Contribution of the Thesis

This thesis makes several contributions to the existing literature in this area of research. First, its in-depth, qualitative approach and thick description (Geertz 1973) help to provide real understanding of the context in which PIED use occurs, and provides an insight into the motivations and beliefs of users that is not present in recent, longitudinal studies, such as Bates and McVeigh (2016), and Kimergård and McVeigh (2014). By providing this depth, and thick description of the ‘realities’ of gym environments, with reference to these more quantitative research outputs, this work provides important context to increase understanding of some of the intricacies and realities of PIED use across diverse user populations. Whilst this type of in-depth ethnographic methodology, developed through a grounded theory approach to data analysis and presentation, has been adopted in previous research into PIED-using populations (Monaghan 2001), the present research ‘updates’ this by conducting comparative analysis of multiple PIED-using subcultures from diverse gym environments, leading to a far richer understanding of how and why use takes place (detailed above).

Second, the most important contribution of this thesis comes from its grounded theory approach to analysis, which led to the identification of categories of user with diverse properties, important to understand in contextualising the increase in PIED use, and shift in user ethnopharmacologies, of recent years. As documented throughout the course of this thesis, the emergence of a theoretical framework in which PIED users could be categorised, and their use understood through their motivations as sport-oriented, image-oriented, or hedonic, allows for much greater understanding of findings reported in longitudinal studies, and through comparative analysis with surveys such as Bates and McVeigh (2016), it was shown in chapter six that this categorisation allows for a more targeted, and explanatory approach to public policy than previous studies of PIED consumption have adopted. If the framework of this thesis, and the categories of user identified herein are applied in future research, it is believed that a far greater understanding of the appropriate context of use will be identified in such work, allowing for more effective policy formulation as a consequence.

Third, in using qualitative methods to affirm the suggestion that PIED use is becoming ‘normalised’ (Parker *et al.* 1998), this thesis illustrates through real, lived experience, the effects and significance of this phenomenon, in a way not captured in quantitative studies into the increasing prevalence of use. The deep understanding offered in analysing ‘normalisation’ through such a qualitative approach allows the normalisation thesis to be better contextualised, accounting for Blackman’s (2004) critique of the theory,

with aspects such as perceptions of stigma explored in a manner which reflects the true feelings and experiences of those involved in PIED use. The understanding and ‘emotional imagination’ (Blackman 2016) this methodology offers to the question of ‘normalisation’ contributes deeply to knowledge in this area, which will offer insight into future work exploring the increasing use of these drugs, as well as understanding of the masculine subcultures encountered and embodied in gym spaces, and the significance of these in our ever-altering culture.

Limitations to Research Findings

As noted in chapters one and two, one of the main limitations of this work is that it is specific to the time and place in which it was conducted. With reference to the first of these limitations, it is clear that, in a globalised and rapidly changing world, a ‘snapshot’ of PIED use taken at a specific time might cease to reflect the realities of use not long after its findings are published. In the course of this work, several respondents made comments reflecting how ‘gym culture’, and the use of PIEDs in these spaces, had changed rapidly over the course of the prior few years. With some of the interviews which form the primary data sources of this thesis having taken place more than three years prior to publication, however, this indicates a possibility that some findings presented here might not reflect the realities of these subcultures for much longer. Whilst a ‘snapshot’ of this type can greatly enhance understanding of use in a given period, therefore, it necessarily must be constantly ‘updated’ with new research if it is to remain relevant to such applications as public policy endeavours. The grounded theory approach of this research, however, allows for such ‘updating’, or revision, since as Glaser and Strauss (1967:243) note, the generation of diverse qualitative facts through which concepts can emerge allows theory to develop with “changing conditions in everyday situations”, in a way theory focussed on quantitative “facts” cannot, noting that “undue emphasis on being ‘scientific’ is simply not reasonable in light of our need for discovery and exploration amid very considerable structural changes” (p.235). Whilst the temporal limitations of this work are acknowledged, therefore, its methodology accounts for this shortcoming, and as this thesis has demonstrated, it is clear that comparative analysis with older works can greatly enhance the understanding of theory discovered from contemporary data, suggesting it is likely to be a useful text to future researchers, even if social structures change considerably in the coming years.

The second of these limitations, relating to geography, and sample recruitment, indicates a need for research of this type to be repeated in different geographical, thus sociocultural environments. As noted throughout this thesis, the contexts in which PIED use occurs are diverse, with the present research

focussing only on use in the South-Devon region. The findings discussed herein are therefore necessarily specific to the region, and characteristics of respondents, and whilst this thesis endeavoured to include comparative analysis with ‘surveys’ from a broader geographical and cultural range, which Glaser and Strauss (1967:223) note can “correct inaccuracies” in a dataset, findings nonetheless necessarily represent the specific region and culture from which they are drawn. This work must therefore be acknowledged as reflecting a particularly white, male, and largely working-class section of the PIED-using population, which additionally is likely to be more socially conservative, based on the rural nature of the region. The impact of this limitation, as relates both to the stigmatisation of medical services by respondents who are more likely to view the military as a career option than the average PIED user, as well as limitations in recruitment for this survey, particularly of women, and elements of ‘hidden ethnography’ this creates (Blackman 2007), have been discussed in chapter two. Nonetheless, these limitations must again be acknowledged in offering conclusions, as they will influence recommendations for future research.

Recommendations for Future Research

Building upon the identified limitations, it is perhaps worth conducting further qualitative study of this nature on more diverse populations, which might help to refine the theoretical framework generated from data in this research. The primary focus in such research should be on exploring the experiences and perceptions of women in gym spaces. As noted throughout this thesis, understanding of the use of PIEDs can be greatly enhanced by a deeper understanding of the cultural context in which this use occurs, and the limited recruitment of women in the present research indicates a clear potential gap in this understanding. Research aimed specifically at exploring women’s experiences would therefore be the most appropriate next step in expanding this research. This could be conducted in a similar manner to the present work, conducting comparative analysis across diverse gym environments and subcultural associations, to see whether the theoretical framework of this thesis can be further refined with a deeper understanding of women’s experiences of the cultural environment of ‘the gym’.

Other ways in which this research could be expanded include the specific recruitment of groups that were less represented in the present work, which although sampling diverse subcultures, nonetheless could be improved with focussing on some of these in greater depth. Although lad culture’s drug use is well contextualised here, for example, work focussed on recruiting more participants of such hedonic subcultures with the specific aim of better understanding their conceptions of masculinity, and sexual practices, might provide greater understanding than this work has shown, which could help refine the theoretical framework adopted here further. Similarly, the increasingly popular sport of ‘Crossfit’, which

combines social-media oriented use with the appearance of sport-oriented training, could be a valuable focus for further study, as the group appears to ‘overlap’ the categories identified in this research, suggesting it would be an appropriate group to study in order to further refine this theory. Whilst ‘Crossfit’ has its own gyms, hence was not represented in the sample of the present research, it is likely it shares commonalities with the broader culture observed in the local gyms studied in this research, and therefore has scope to add meaningful data to the present work.

Finally, a focus on more urban, middle-class, and ethnically diverse populations, could all help to further refine the theoretical framework of this research, which as noted is overwhelmingly white, working-class, and rural. Although this is accounted for in acknowledging that the present research is an ethnography of PIED use and gym-going subcultures specific to the Devon region, broader research that contextualises this could add meaningful contributions to the theoretical framework of the research.

Bibliography

- ACMD (2010) *Advisory Council on the Misuse of Drugs: Consideration of the Anabolic Steroids*. London: Home Office; 2010
- AnabolicMen.com (4th January 2015) "The Ultimate No-BS Guide to Natural Herbal Testosterone Boosters" by Ali Kuoppala. Retrieved from: <https://www.anabolicmen.com/herbal-testosterone-booster-guide/> on 03/06/2016
- AnabolicMinds.com (2006) "Trenbolone, the only steroid to cause 'roid rage'?" by 'jomi822'. *Anabolic Minds Forum* 18/10/2006. Retrieved from: <http://anabolicminds.com/forum/steroids/54025-trenbolone-only-steroid.html> on 24.07.2016
- Anderson, E. (2009) *Inclusive Masculinity: The Changing Nature of Masculinities*. London: Routledge
- Anderson, E. and McCormack, I. (2016) "Inclusive Masculinity Theory: Overview, Reflection and Refinement", *Journal of Gender Studies*: 1-15. <https://doi.org/10.1080/09589236.2016.1245605>
- Angrosino, M. (2007) *Doing Ethnographic and Observational Research*. London: Sage
- Ariely, D. (2008) *Predictably Irrational: The Hidden Forces that Shape Our Decisions*. London: Harper Collins
- Arnett, J. (1995) "The Young and the Reckless: Adolescent Reckless Behavior". *Current Directions in Psychological Science*. Vol.4(3):67-71
- Assael, S. (2007) *Steroid Nation*. New York: ESPN Publishing
- Assael, S. and Mooneyham, M. (2004) *Sex, Lies and Headlocks: The Real Story of Vince McMahon and World Wrestling Entertainment*. New York: Three Rivers Press
- Bachman, R. and Schutt, R. (2001) *The Practice of Research in Criminology and Criminal Justice*. California: Pine Forge Press.
- Back, L. (1993) "Gendered Participation: Masculinity and Fieldwork in a South London Adolescent Community", in Bell, D., Caplan, P. and Karim, W.J. (Eds) *Gendered Fields: Women, Men and Ethnography*, pp.215-223. London: Routledge
- Back, L. (2007) *The Art of Listening*. Oxford: Berg
- Back, L. (2012) "Live Sociology: Social Research and its Futures". *The Sociological Review*, Vol. 50(S1): 18-39
- Barton, A. (2011) *Illicit Drugs: Use and Control* (2nd Edn). London: Routledge Falmer
- Barton, A., and Husk, K. (2012) "Controlling Pre-Loaders: Alcohol Related Violence in an English Night Time Economy", *Drugs and Alcohol Today*, Vol. 12(2):89 - 97
- Barton, A., and Husk, K. (2014) "'I Don't Really Like the Pub [...]' Reflections on Young People and Pre-loading Alcohol". *Drugs and Alcohol Today*, Vol.14(2):58 – 66
- Bates, G. and McVeigh, J. (2016) *Image and Performance Enhancing Drugs: 2015 Survey Results*. Liverpool:

John Moores University.

BBC Any Questions (22.07.2016) "Any Questions? Hazel Blears, Richard Burgen MP, Anna Soubry MP, Peter Hitchens". [Chairman: Jonathan Dimbleby]. BBC Radio 4. Available from: <http://www.bbc.co.uk/programmes/b07ks4m6> (10/08/2016)

BBC News (31.05.2012) "Breivik: Court in Norway Hears Killer Took Stimulants." BBC News. Retrieved from: <http://www.bbc.co.uk/news/world-europe-18282760> on 17/07/2016.

BBC News (23.01.2013) "Police Corruption: Criminals 'Give Officers Steroids'". Retrieved from <http://www.bbc.co.uk/news/uk-21154316>

BBC News (25.02.2015) "Rising Number of Young Men Using Steroids in London, Charity Warns" BBC.co.uk. Papadopoulos, E. Retrieved from: <http://www.bbc.co.uk/news/uk-england-london-31615269>

BBC Sport (15.07.2013) "Tyson Gay and Asafa Powell: Olympic Sprinters Fail Drug Tests". BBC Sport online. Retrieved from: <http://www.bbc.co.uk/sport/0/athletics/23307913> on 22/04/2017

BBC Sport (07.04.2017) "Jemima Sumgong: 2016 Olympic Marathon Champion Fails Drugs Test" BBC Sport Online. Retrieved from: <http://www.bbc.co.uk/sport/athletics/39522434> on 22/04/2017

Beaver, K., Vaughn, M., DeLisi, M., and Wright, J. (2008) "Anabolic-Androgenic Steroid Use and Involvement in Violent Behavior in a Nationally Representative Sample of Young Adult Males in the United States". *American Journal of Public Health*. Vol. 98(12):2185-2187

Becker, G. (1974) "Crime and Punishment: An Economic Approach". *Essays in the Economics of Crime and Punishment* by Becker, G. and Landes, M. (Eds.). Chicago: National Bureau of Economic Research. Available from: <http://www.nber.org/books/beck74-1>

Becker, H. (1953) "Becoming a Marihuana User". *American Journal of Sociology*. Vol.59(3):235-242

Becker, H. (1963) *Outsiders: Studies in the Sociology of Deviance*. New York: Free Press

Becker, H. (1967) "Whose Side are we on?" *Social Problems*, Vol. 14(3): 239-247

Belakova, V., and Vaccaro, C. A. (2013) "'A Friend With Weed Is a Friend Indeed': Understanding the Relationship Between Friendship Identity and Market Relations Among Marijuana Users" *Journal of Drug Issues*: Feb 11 2013. 0022042613475589

Bell, C. [Director] (2008*i*) "*Bigger, Stronger, Faster**" [Film]. Director: Chris Bell. BSF Film.

Bell, C. [Director] (2008*ii*) "BIGGER STRONGER FASTER* deleted scene: 'Roid Rage'" [Video File]. Magnolia Pictures & Magnet Releasing. Retrieved from: <https://www.youtube.com/watch?v=yG89XmCCaw4> on 13.11.2016

Bell, C. [Director] (2014) "From FAT Powerlifter to JACKED Metrosexual...The Mark Bell Story" [Short film]. Omarlsuf. Available from: <https://www.youtube.com/watch?v=Hd6WLasmxyA>

Bell, C. [Director] (2015) "Prescription Thug\$: Is There Really a War on Drugs?". Samuel Goldwyn Films. [Documentary Film]

Bent, S., Kane, C., Shinohara, K., Neuhaus, J., Hudes, E., Goldberg, H., and Avins, A (2006) "Saw Palmetto for Benign Prostatic Hyperplasia". New England Journal of Medicine. Vol.354:557-566

Berridge, V. (1989) "Historical Issues", in MacGregor, S. (Ed.) *Drugs and British Society: Responses to a Social*

Problem in the Eighties. London: Routledge.

Berridge, V. (1996) *AIDS in the UK: The Making of Policy, 1981–1994*. Oxford: Oxford University Press

Biernacki, P., and Waldorf, D. (1981) "Snowball Sampling: Problems and Techniques of Chain Referral Sampling". *Sociological Methods & Research*. Vol.10(2):141-163.

Bjorkqvist, K., Nygren, T., Bjorklund, A., and Bjorkqvist, S. (1994) "Testosterone Intake and Aggression: Real Effect or Anticipation?" *Aggressive Behaviour*. Vol.20(1):17-26

Blackman, S. (1995) *Youth: Positions and Oppositions – Style, Sexuality and Schooling*. Aldershot: Avebury Press

Blackman, S. (2004) *Chilling Out: The Cultural Politics of Substance Consumption, Youth and Drug Policy*. Maidenhead: Open University Press

Blackman, S. (2005) "Youth Subcultural Theory: A Critical Engagement with the Concept, its Origins and Politics, from the Chicago School to Postmodernism" *Journal of Youth Studies* Vol.8(1):1-20

Blackman, S. (2007) "Hidden Ethnography: Crossing Emotional Borders in Qualitative Accounts of Young People's Lives". *Sociology*, Vol. 41(4): 699-716

Blackman, S. (2010) "'The Ethnographic Mosaic' of the Chicago School: Critically Locating Vivien Palmer, Clifford Shaw and Frederick Thrasher's Research Methods in Contemporary Reflexive Sociological Interpretation" in Hart, C. (Ed) *The Legacy of the Chicago School of Sociology. A collection of essays in honour of the Chicago School of Sociology during the first half of the 20th century*, pp. 195-215. Cheshire: Midrash

Blackman, S. (2016) "The Emotional Imagination: Exploring Critical Ventriloquy and Emotional Edgework in Reflexive Sociological Ethnography with Young People", in Blackman, S. and Kempson, M. (Eds) *The Subcultural Imagination: Theory, Research and Reflexivity in Contemporary Youth Studies*, pp.65-79. London: Routledge

Blackman, S. and Kempson, M. (Eds) (2016) *The Subcultural Imagination: Theory, Research and Reflexivity in Contemporary Youth Studies*. London: Routledge

Bleeker, A. (2014) "The Mirror Effect: The Rising Use of Performance and Image Enhancing Drugs". *Of Substance: The National Magazine on Alcohol, Tobacco and Other Drugs*. Vol.12(3):22-25

BloodyElbow.com (13.02.2015) "Brendan Schaub Says There's No Reason not to Take Steroids in the UFC" by Tabuena, A. *SBNation*. Retrieved from: <http://www.bloodyelbow.com/2015/2/13/8033209/brendan-schaub-says-theres-no-reason-not-to-take-steroids-in-the-ufc> on 22/04/2017

Bodybuilding.com Forum (2004) "I Was Diagnosed with Low Testosterone", by 'Nellius'. *Bodybuilding.com*. Retrieved from: <http://forum.bodybuilding.com/showthread.php?t=223771>

Bowker, L. (Ed) (1998) *Masculinities and Violence*. London: Sage

Bridel, W. and Rail, G. (2007) "Sport, Sexuality, and the Production of (Resistant) Bodies: De-/Re-Constructing the Meanings of Gay Male Marathon Corporeality". *Human Kinetics Journals*, Vol. 24(2): 127-144

Brower, K., Blow, F., and Hill, E. (1993) "Risk Factors for Anabolic-Androgenic Steroid Use in Men" *Journal of Psychiatric Res.* Vol.28(4):369-380

Burgess, E. (1923) "The Study of the Delinquent as a Person" *American Journal of Sociology*. Vol.28:657-680

Burgess, E. (1925) "The Growth of the City: An Introduction to a Research Project" in Park, R., and Burgess, E. (Eds.) *The City*. Chicago: Chicago University Press

Burgess, R. and Akers, R. (1966) "A Differential Association Reinforcement Theory of Criminal Behaviour". *Social Problems*. Vol.14(2): 128-14

Burkitt, I. (2012) "Emotional Reflexivity: Feeling, Emotion and Imagination in Reflexive Dialogues", *Sociology* Vol. 46 (3): 458-472

Butler, J. (1990) *Gender Trouble: Feminism and the Subversion of Identity*. London: Routledge

Butler, J. (2004) *Undoing Gender*. London: Routledge

Calafat, A. (1998) *Nightlife in Europe and Recreational Drug Use*. Palma de Majorca: SONAR98 IREFREA/European Commission

Carrigan, T., Connell, R. and Lee, J. (1985) "Toward a New Sociology of Masculinity", *Theory and Society*, Vol.14(5): 551-604

Centre for Young Women's Health (2011) "Medical Uses of the Birth Control Pill". *Centre for Young Women's Health*. Retrieved from: <http://youngwomenshealth.org/2011/10/18/medical-uses-of-the-birth-control-pill/> (Updated 26th March 2014; Retrieved 15th March 2016)

Channel 4 (5th July 2010) "Gunman Violence could be Linked to Steroid Abuse" by Kris Jepson. *Channel 4 News*. Retrieved from:

<http://www.channel4.com/news/articles/uk/moataposs+violence+could+be+linked+to+steroid+abuse/3700487.html> on 10/08/2016

Choi, P., and Pope, H. (1994) "Violence Toward Women and Illicit Androgenic-Anabolic Steroid Use" *Annals of Clinical Psychiatry*. Vol.6(1):21-25

Choi, P., Parrott, A. and Cowan, D. (1989) "Adverse Behavioural Effects of Anabolic Steroids in Athletes: A Brief Review" *Clinical Sports Medicine*. Vol.1:183-187

Clarke, G. (1982) *Defending Ski-jumpers: A Critique of Theories of Youth Sub-Cultures*. Birmingham: University of Birmingham Centre for Contemporary Cultural Studies

CMA (2015) "Online Reviews and Endorsements: Report on the CMA's Call for Information". 19th June 2015. London: Competition and Markets Authority. Available from: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/436238/Online_reviews_and_endorsements.pdf

CNN (29th June 2007) "'Roid Rage' Questions Surround Benoit Murder-Suicide". Retrieved from <http://edition.cnn.com/2007/US/06/27/wrestler/>

Coakley, J. and Hughes, R. (1994) "Deviance in Sport" in Coakley, J. (Ed.) *Sport in Society, Issues and Controversies* (5th Edn.). St. Louis: Mosby

Coffey, A. (1999) The Ethnographic Self: Fieldwork and the Representation of Identity. Thousand Oaks, CA: Sage.

Coggans, N. and McKeller, S. (1994) "Drug Use Amongst Peers: Peer Pressure or Peer Preference". *Drugs: Education, Prevention and Policy*. Vol.1(1):15-26

Cohen (1972) *Moral Panics and Folk-Devils*. London: Routledge

Cole, C., Jones, L., McVeigh, J., Kicman, A., Syed, Q. and Bellis, M. (2012). *CUT: A Guide to Adulterants, Bulking Agents and Other Contaminants Found in Illicit Drugs*. Liverpool: John Moores University. Available from: <http://www.cph.org.uk/wp-content/uploads/2012/08/cut-a-guide-to-the-adulterants-bulking-agents-and-other-contaminants-found-in-illicit-drugs.pdf>

Collins, J. and Messerschmidt, P. (1993) "Epidemiology of Alcohol-Related Violence" *Alcohol Health and Research World*. Vol.17(2):93

Connell, R. (1983) *Which way is up? Essays on Sex, Class and Culture*. Sydney: Allen & Unwin.

Connell, R. (1995) *Masculinities*. London: Allen and Unwin

Connell, R. and Messerschmidt, J.W. (2005) "Hegemonic Masculinity: Rethinking the Concept". *Gender and Society*, Vol.19: 829–859.

Coomber, R. (1993) "Drugs in Sport: Rhetoric or Pragmatism" *International Journal of Drug Policy*. Vol. 4(4): 169-178

Coomber, R. (1996) "The Effect of Drug Use in Sport on People's Perception of Sport: The Policy Consequences", *The Journal of Performance Enhancing Drugs*, Vol.1(1):16-20

Coomber, R. (1997i) "The Adulteration of Drugs: What Dealers do to Illicit Drugs, and What They Think is Done to Them". *Addiction Research*. Vol.5(4):297-306

Coomber, R. (1997ii). "Vim in the Veins – Fantasy or Fact: the Adulteration of Illicit Drugs." *Addiction Research*. Vol 5(3):195–212.

Coomber, R. (1999) "Controlling Drugs in Sport: Contradictions and Complexity" in South, N. (Ed) (1999) *Drugs: Cultures, Controls & Everyday Life*. London: Sage

Coomber, R. (2003) "There's No Such Thing as a Free Lunch: How 'Freebies' and 'Credit' Operate as Part of Rational Drug Market Activity". *Journal of Drug Issues*. Vol.33(4):939-962

Coomber (2006i) *Pusher Myths: Re-Situating the Drug Dealer*. London: Free Association Books.

Coomber, R. (2006ii). "Drugs and Violence". In Kuhar, M. and Liddle, H. (Eds). *Drugs and Society*, Vol.3. Singapore: Marshall Cavendish

Coomber, R. (2010) "Reconceptualising Drug Markets and Drug Dealers – the Need for Change." *Drugs and Alcohol Today*. Vol.10(1):10-13

Coomber, R. (2013) "How Social Fear of Drugs in the Non-Sporting World Creates a Framework for Doping Policy in the Sporting World". *International Journal of Sport Policy and Politics*, Vol.6(2):171-193.

Coomber, R. and Maher, L. (2006). "Street-level Drug Market Activity in Sydney's Primary Heroin Markets: Organisation, Adulteration Practices, Pricing, Marketing and Violence". *Journal of Drug Issues*.Vol.36(3):719–754.

Coomber, R., and Moyle, L. (2014) "Beyond Drug Dealing: Developing and Extending the Social Supply of Drugs to 'Minimally Commercial Supply'" *Drugs: Education, Prevention and Policy*. Vol.21(2):157

Coomber, R., Pavlidis, A., Hanley Santos, G., Wilde, M., Schmidt, W., and Redshaw, C. (2015) "The Supply of Steroids and Other Performance and Image Enhancing Drugs (PIEDs) in One English City: Fakes, Counterfeits,

Supplier Trust, Common Beliefs, and Access" *Performance Enhancement and Health* (2015): <http://dx.doi.org/10.1016/j.peh.2015.10.004>

Coomber, R., Moyle, L. and South, N. (2015*ii*) "The Normalisation of Drug Supply: The Social Supply of Drugs as the "Other Side" of the History of Normalisation" *Drugs: Education, Prevention and Policy*. Vol.23(3): 255-263

Coomber, R., and Turnball, P. (2007) "Arenas of Drug Transactions: Adolescent Cannabis Transactions in England—Social Supply" *Journal of Drug Issues* Vol. 37(4):845-865

Courtenay, W. (2000) "Constructions of Masculinity and their Influence on Men's Well-Being: A Theory of Gender and Health" *Social Science & Medicine*. Vol.50(10):1385–1401

Cooper, C. (2012) *Run, Swim, Throw, Cheat: The Science Behind Drugs in Sport*. Oxford: Oxford University Press.

Cotterill, P. and Letherby, G. (1993) "Weaving Stories: Personal Auto/Biographies in Feminist Research". *Sociology*, Vol. 27(1): 67-79

CPS.gov.uk (14th Feb 2012) "Supplying or Offering to Supply a Controlled Drug". Available from: http://www.cps.gov.uk/legal/s_to_u/sentencing_manual/supply_class_a_drugs/

Cram, S. (2008) "Jenkins shows Jones that cheats can prosper" *Guardian Online*. 15th January 2008. Retrieved from: <http://www.theguardian.com/sport/2008/jan/15/athletics.sport2>

Crick, M. (1992) 'Ali and Me: An Essay in Street-Corner Anthropology', in Okely, J. and Callaway, H. (Eds) *Anthropology and Autobiography*, pp. 175–192, London: Routledge.

Curtis, R. and Wendel, T. (2007) "'You're Always Training the Dog': Strategic Interventions to Reconfigure Drug Markets". *Journal of Drug Issues*. Vol.37(4)

Daily Mirror (28th May 2014) "Virgin Killer 'Hooked on Bodybuilder Pills'" by Bucktin, C. Daily Mirror [Print Edition]

Dalrymple, T. (2009) *Second Opinion: A Doctor's Dispatches from the British Inner City*. Cheltenham: Monday Books

Darke, S., Kaye, S., Ross, J. (2001) "Geographical Injecting Locations Among Injecting Drug Users in Sydney, Australia". *Addiction Journal*. Vol.96(2):241-246

Davis, N. (2003) *Game Theory: A Nontechnical Introduction*. New York: Dover

Dawkins, R. (1976) *The Selfish Gene*. Oxford: Oxford University Press

Dawkins (1982) *The Extended Phenotype*. Oxford: Oxford University Press

Dawkins (1986) *The Blind Watchmaker*. New York: Norton & Company

Deephalf.com (20.12.2016) "Competing in Brazil Part III: Cheaper than Protein" by A. Morris. Retrieved from: <http://talesfromdeephalf.com/?p=2745> on 09.04.2017

Donohue, T. and Johnson, N. (1986) *Foul Play: Drug Abuse in Sports*. Oxford: Basil Blackwell.

Dubin, The Hon. Charles L. (1990) *Commission of Inquiry into the Use of Drugs and Banned Practices Intended to Increase Athletic Performance*. Ottawa: Canadian Government Publishing Centre.

Duchaine, D. (1989) *The Underground Steroid Handbook* (2nd Edn). Venice, California: HLR Technical Books

DuRant, R., Rickert, V., Ashworth, C., Newman, C., and Slavens, G. (1993) "Use of Multiple Drugs Among Adolescents Who Use Anabolic Steroids" *New England Journal of Medicine*. April 1st 1993: 922-926.

Durkheim, E. (1893) *The Division of Labour in Society*. New York: Free Press (1984 Edition, Translated by Halls, W. D.)

Durkheim, E. (1897) *Suicide*. New York: Free Press (1951 Edition, Translated by Spalding, J. and Simpson, G.)

Eagleman, D. (2011) *Incognito: The Secret Lives of the Brain*. Edinburgh: Canongate

EliteFitness.com (2001) "Tren Rage" by tprop, 21st November 2001. Retrieved from: <https://www.elitefitness.com/forum/anabolic-steroids/tren-rage-83927.html> on 20/07/2016.

EliteFitness.com (2005) "Post Cycle Therapy" published by 'Jenetic' 14/02/2005. Retrieved from: <http://www.elitefitness.com/forum/anabolic-steroids/post-cycle-therapy-376177.html> on 28/04/2016

Ellis, C., Adams, T. and Bochner, A. (2011) "Autoethnography: An Overview". *Forum Qualitative Sozialforschung / Forum: Qualitative Social Research*. Vol.12(1), Art.10. <http://nbn-resolving.de/urn:nbn:de:0114-fqs1101108>.

Erspamer, V., Erspamer, G.F., Severini, C., Potenza, R.L., Barra, D., Mignogna, G., Bianchi, A. (1993) "Pharmacological Studies of 'Sapo' from the Frog Phyllomedusa Bicolor Skin: a Drug Used by the Peruvian Matses Indians in Shamanic Hunting Practices". *Toxicon* 31(9):1099-1111

Evans, N. (1997) "Gym and Tonic: A Profile of 100 Male Steroid Users". *British Journal of Sports Medicine*. Vol.31(1):93-104

Evans-Brown, M., McVeigh, J., Perkins, C., Bellis, M. A. (2012) *Human Enhancement: The Emerging Challenges to Public Health*. Liverpool: John Moores University

Estrin, S., Laidler, D., Dietrich, M. (2008) *Microeconomics* (5th Edn) Harlow: Pearson.

Evolutionary.org (2015) "High Tren Low Test vs Low Tren High Test" by Cavi, 30th Sept 2015. Retrieved from: <http://www.evolutionary.org/forums/anabolic-steroids-peds/high-tren-low-test-vs-low-tren-high-test-37511.html> on 18/08/2016

Fagan, J. (1990) "Intoxication and Aggression" in Tonry, P., and Wilson, J. (Eds) (1990) *Drugs and Crime*. Chicago: University of Chicago Press

Ferrell, J. (1997) "Criminological Verstehen: Inside the Immediacy of Crime", *Justice Quarterly*, Vol.15(4): 587-608

Ferrell, J., Hayward, K., Young, J. (2008) *Cultural Criminology: An Invitation*. London: Sage

FloCombat.com (11.08.2016) "Chael Sonnen: "We Didn't Need a Test to Tell Us Anything About Brock" by Edwards, J. *FloSports*. Retrieved from: <http://www.flocombat.com/article/44880-chael-sonnen-we-didnt-need-a-test-to-tell-us-anything-about-brock#.WPu4ytLyvIU> on 22/04/2017

FloCombat.com (19.09.2016) "Guide to RIZIN FF World Grand Prix Round One" by Edwards, J. *FloSports*. Retrieved from: <http://www.flocombat.com/article/46338-guide-to-rizin-ff-world-grand-prix-round-one#.WPu75NlrLIU> on 22/04/2017

Foote Whyte, W. (1943) *The Social Structure Of An Italian Slum* [4th Edn., 1993 paperback issue]. Chicago:

University of Chicago Press

Foucault, M. (1961) *Madness and Civilization: A History of Insanity in the Age of Reason*. London: Routledge (2001 Paperback Edition, Translated by Howard, R.)

Foucault, M. (1975) *Discipline and Punish*. London: Penguin. (1991 New Edition, Translated by Sheridan, A.)

Fox News (11th Jan 2012) "Roid Rage Caught on Tape". [Video Clip] *Fox News Video*. Retrieved from: <http://video.foxnews.com/v/1384028540001/roid-rage-caught-on-tape/?#sp=show-clips> on 10/08/2016

Frederick, D. and Haselton, M. (2007) "Why Is Muscularity Sexy? Tests of the Fitness Indicator Hypothesis". *Personality and Social Psychology Bulletin (Sage)*. August 2007, Vol.33(8):1167-1183

Fussel (1991) *Muscle: Confessions of an Unlikely Bodybuilder*. New York: Simon and Schuster

Gardiner, S., O'Leary, J., Welch, R. Boyes, S. and Naidoo, U. (2011) *Sports Law* (4th Edn.) Abingdon: Routledge

Gardner, D. (2009) *Risk: The Science and Politics of Fear*. London: Virgin (Penguin)

Gardner, M. and Steinberg, L. (2005) "Peer Influence on Risk Taking, Risk Preference, and Risky Decision Making in Adolescence and Adulthood: An Experimental Study". *Developmental Psychology*, Vol.41(4): 625-635.

Geertz, C. (1973) "Thick Description: Toward an Interpretive Theory of Culture" in Geertz, C. *The Interpretation of Cultures: Selected Essays*, pp.3-32. New York: Basic Books

George, A. (1996) "Gamma-Hydroxybutyrate – Its Social and Sporting Abuse" *Pharmacology Journal*. Vol.256:503-504

George, A. (2005) "Androgenic Anabolic Steroids" in Mottram, D. (Ed.) *Drugs in Sport* (4th Edn). London: Routledge

Giddens, A. (1991) *Modernity and Self-Identity: Self and Society in the Late Modern Age*. Cambridge: Polity Press

Gill, R. (2011) "Sexism Reloaded, or, It's Time to Get Angry Again". *Feminist Media Studies*, Vol.11(1): 67-71

Gladstone Observer (13th Jan 2014) "Roid Rage a Concern as Police Keep a Lid on Violence" by Sawyer, S. *Gladstone Observer (Australia)*. Retrieved from:

<http://www.gladstoneobserver.com.au/news/alcohol-steroids-behind-violence-outbreak/2137066/> on 10/08/2016

Glaser, B. and Strauss, A. (1967) *The Discovery of Grounded Theory: Strategies for Qualitative Research*. New Jersey: Aldine

Grant, J., Menard, W., Pagano, M., Fay, C., and Phillips, K. (2005) "Substance Use Disorders in Individuals With Body Dysmorphic Disorder". *Journal of Clinical Psychiatry*. Vol. 66(3): 309-316

Groger, L., Mayberry, P., and Straker, J. (1999) "What We Didn't Learn Because of Who Would Not Talk to Us". *Qualitative Health Research*. Vol.9(6):829-835.

Grunau, R. and Whitson, D. (1993) *Hockey Night in Canada: Sport, Identities and Cultural Politics*. Toronto: Garamond Press

Grund, J., Blanken, P., Adriaans, N., Kaplan, C., Barendregt, C, and Meeuwsen, M. (1992) "Reaching the

Unreached: An Outreach Model for 'On the Spot' AIDS Prevention Among Active, Out-of-Treatment Drug Addicts" in O'Hare, P., Newcombe, R., Matthews, A., Buning, E., and Drucker, E. (Eds) *The Reduction of Drug Related Harm*. London: Routledge.

Guardian (21.04.2015) "Woman Dies after Taking 'Diet Pills' Bought over Internet" by Khomami, N. *Guardian Online*. Retrieved from: <http://www.theguardian.com/society/2015/apr/21/woman-dies-after-taking-diet-pills-bought-over-internet> on 23/05/2016

Guardian (24.04.2015) "Usain Bolt says Tyson Gay should have been banned for life for doping" by Guardian staff. *Guardian Sport*. Retrieved from: <https://www.theguardian.com/sport/2015/apr/24/usain-bolt-tyson-gay-kicked-out-drugs-test> on 22/04/2017

Guardian (19.06.2015) "Spiralling Anabolic Steroid Use Leaves UK Facing Health Timebomb, Experts Warn". *Guardian Online*. Walker, P. Retrieved from: <http://www.theguardian.com/society/2015/jun/19/anabolic-steroid-use-leaves-britain-facing-health-timebomb> on 23/05/2016

Guardian (16.07.2016) "Will the UFC's Drug-Testing Program Prove too Credible for its Own Good?" by Carpenter, L. *Guardian Sport*. Retrieved from: <https://www.theguardian.com/sport/blog/2016/jul/16/will-the-ufcs-drug-testing-program-prove-too-credible-for-its-own-good> on 22/04/2017

Guttman, A. (1992) *The Olympics: A History of the Modern Games*. Urbana and Chicago: University of Illinois Press.

Haidt, J. (2012) *The Righteous Mind: Why Good People are Divided by Politics and Religion*. London: Penguin

Hall, W. and Lynskey, M. (2005) "Is Cannabis a Gateway Drug? Testing Hypotheses About the Relationship Between Cannabis Use and the Use of Other Illicit Drugs" *Drug and Alcohol Review*. Vol.24:39–48

Harford, T. (2008) *The Logic of Life*. London: Random House

Harrison, S. and Ahmad, W. (2000) "Medical Autonomy and the UK State 1975 to 2025". *Sociology*. Vol.34(1):129-146

Hart, C. (Ed) (2010) *The Legacy of the Chicago School of Sociology. A collection of essays in honour of the Chicago School of Sociology during the first half of the 20th century*. Cheshire: Midrash

Harvey, B [Director] (2014) *The Culture High*. Score G Productions/Sophia Entertainment [Documentary Film]

Herzfeld, M. (1985) *The Politics of Manhood: Contest and Identity in a Cretan Mountain Village*. Princeton: Princeton University Press

Hill, A. (2017) "What Really Happens on a Lads' Holiday? 5 Guys Look Back on Their Summer", Metro 24th Oct 2017. Retrieved from: <https://metro.co.uk/2017/10/24/what-really-happens-on-a-lads-holiday-5-guys-look-back-on-their-summer-7012926/>

Hirsch, F. (1977) *The Social Limits to Growth*. London: Routledge & Kegan Paul.

Hirschi, T. (1969) *Causes of Delinquency*. Berkeley: University of California Press.

Hitchens, P. (2012) *The War We Never Fought: The British Establishment's Surrender to Drugs*. London: Bloomsbury

Hoberman, J. (2006) *Testosterone Dreams: Rejuvenation, Aphrodesia, Doping*. Berkeley and Los Angeles: University of California Press

Holland, J. (2007) "Emotions and Research". *International Journal of Social Research Methodology*, Vol. 10(3): 195-209

Hooks, B. (2003) *We Real Cool: Black Men and Masculinity*. London: Routledge

Hotten, J. (2004) *Muscle: A Writer's Journey Through a Sport with No Boundaries*. London: Yellow Jersey Press

Houlihan, B. (1999) *Dying to Win: Doping in Sport and the Development of Anti-Doping Policy*. Strasbourg: Council of Europe

IB Times (7th Dec 2011) "Ruben Azru: When Roid Rage Turns Deadly" by Lewis, J. *International Business Times*. Retrieved from: <http://www.ibtimes.co.uk/ruben-azru-roid-rage-turns-deadly-263137> on 10/08/2016

Inoue, E. (2014) *Live as a Man, Die as a Man, Become a Man: Volume 1* (28 May 2014). CreateSpace Independent Publishing Platform

Jersey Shore (2009) *Jersey Shore*, MTV, 3rd December 2009.

JewishCurrents.org (16th June 2015) "The Zeyde of Psychedelics". Retrieved from: <http://jewishcurrents.org/june-17-the-zeyde-of-psychadelics-37296> on 03.06.2016

Kahneman, D. (2012) *Thinking, Fast and Slow*. London: Penguin

Kessler, S., Ashenden, D., Connell, R., Dowsett, G. (1982) Ockers and Disco-Maniacs: Sex, Gender and Secondary Schooling. Sydney: Inner City Education Centre (Cited in Wedgwood, N. (2009) "Connell's Theory of Masculinity – Its Origins and Influences on the Study of Gender", *Journal of Gender Studies*, Vol. 18(4): 329-339)

Kimmage, P. (1990) *A Rough Ride: An Insight into Pro Cycling*. London: Stanley Paul.

Kimergård, A., and McVeigh, J. (2014) "Variability and Dilemmas in Harm Reduction for Anabolic Steroid Users in the UK: a Multi-Area Interview Study" *Harm Reduction Journal*. Vol.11(19).

Klein, A. (1993) *Little Big Men: Bodybuilding Subculture and Gender Construction*. Albany, NY: State University of New York Press.

Klein, A. (1995) "Life's too Short to Die Small: Steroid Use Among Male Bodybuilders" in Sapo, D., and Gordon, R. (Eds) *Men's Health and Illness: Gender, Power and the Body*. London: Sage

Komi, P. (Ed) (2003) *Strength and Power in Sport* (2nd Edn). Oxford: Blackwell

Kozinets, R. (2009) *Netnography: Doing Ethnographic Research Online*. London: Sage

Krienert, J. (2003) "Masculinity and Crime: A Quantitative Exploration of Messerschmidt's Hypothesis" *Electronic Journal of Sociology*. Available from: http://www.sociology.org/content/vol7.2/01_krienert.html

Krugman, P. (2015) "Thorstein Veblen in Brooklyn" in *New York Times*, July 26th 2015. Retrieved from: http://krugman.blogs.nytimes.com/2015/07/26/thorstein-veblen-in-brooklyn-trivial/?_r=0

Krüskemper, H. and Noell, G. (1966) "Liver Toxicity of a New Anabolic Agent: Methyltrienolone (17α-Methyl-4,9,11-estratriene-17β-ol-3-one)". *Steroids*. Vol.8(1):13-24

Kuipers, H. (1998). "Anabolic Steroids: Side Effects". In Fahey, T. (Ed) *Encyclopedia of Sports Medicine and*

Science. Internet Society for Sport Science. 7 March 1998. Available from:
<http://sportsci.orgencyc/anabstereff/anabstereff.html>

Lenehan, P., Bellis, M., and McVeigh, J. (1996) "A Study of Anabolic Steroid Use in the North West of England", *Journal of Performance Enhancing Drugs*, Vol.1(2):57-70

Letherby, G. (2000) "Dangerous Liasons: Auto/biography in Research and Research Writing", in Lee-Treweek, G. and Linkogle, S. (Eds) *Danger in the Field*, pp.91-113. London: Routledge

Letherby, G. (2003) *Feminist Research in Theory and Practice*. Buckingham: Open University Press

Levine, J., Sorace, M., Spencer, J., Siegel, D. (2005) "The Indoor UV Tanning Industry: A review of Skin Cancer Risk, Health Benefit Claims, and Regulation". *Journal of the American Academy of Dermatology*. Vol. 53(6):1038–1044

Llewellyn, W. (2011) *Anabolics* (10th Edn) Florida: Molecular Nutrition LLC.

Llewellyn, W. and Tober, R. (2010) *Underground Anabolics* [Kindle Edition]. Florida: Molecular Nutrition LLC.

Lloyd, W. F. (1833). *Two Lectures on the Checks to Population*. Oxford: Oxford University.

Los Angeles Times (15th July 2016). "Orlando Gunman was HIV-Negative, and Probably a Long-Term Steroid User, Autopsy Shows". by Wilber, D. Q. *Los Angeles Times*. Published on 15th July 2016. Retrieved from: <http://www.latimes.com/nation/la-na-mateen-steroid-hiv-20160715-snap-story.html> on 17/07/2016.

Lupton, D. (1997) *The Imperative of Public Health: Public Health and the Regulated Body*. London: Sage

Mac an Ghaill, M. (1994) *The Making of Men: Masculinities, Sexuality and Schooling*. Milton Keynes: Open University Press

MacLean, S. (2016) "Alcohol and the Constitution of Friendship for Young Adults". *Sociology* Vol. 50(1): 93-108

Maffesoli, M. (1996) *The Time of the Tribes: The Decline of Individualism in Mass Society*. London: Sage

Maravelias, C., Dona, A., Stefanidou, M., Spiliopoulou C. (2005) "Adverse Effects of Anabolic Steroids in Athletes: A Constant Threat". *Toxicology Letters*. Vol.158(3):167–175

Maréchal, G. (2010) "Autoethnography". In Mills, A, Durepos, G. and Wiebe, E. (Eds.) *Encyclopedia of Case Study Research*. Vol.2. pp. 43–45. Thousand Oaks, CA: Sage Publications.

Marks, L., Partin, A., Epstein, J., Tyler, V., Inpakala, S., MacAiran, M., Chan, T., Dorey, F., Garris, J., Veltri, R., Santos, P. B., Stonebrook, K. and DeKernion, J. (2000) "Effects of a Saw Palmetto Herbal Blend in Men with Symptomatic Benign Prostatic Hyperplasia". *Journal of Urology*. Vol. 163(5):1451–1456

Martin, C. (2014) "How Sad Young Douchebags Took Over Modern Britain", *Vice UK*, 13.03.2014. Retrieved from: http://www.vice.com/en_uk/read/anatomy-of-a-new-modern-douchebag

Mason, O. J., and Strauss, K. (2004) "Testicular Cancer: Passage through the Help-Seeking Process for a Cohort of U.K. Men". *International Journal of Men's Health*. Vol.3(2):93.

Matsumoto, A (1994) "Hormonal Therapy of Male Hypogonadism". *Endocrinology and Metabolism Clinics of North America*. Vol.23(4):857-875

Mayo Clinic (2016) "Testosterone, Total, Bioavailable, and Free, Serum: Clinical and Interpretive" *May Clinic*.

Retrieved from: <http://www.mayomedicallaboratories.com/test-catalog/Clinical+and+Interpretive/83686> on 15th March 2016

McRobbie, A. (1999) "Thinking with Music" in Kelly, K. and McDonnell, E. (Eds) *Stars Don't Stand Still in the Sky: Music and Myth*. London: Routledge

McRobbie, A. and Garber, J. (1975) "Girls and Subcultures", in Hall, S. and Jefferson, T. (Eds) *Rituals Through Resistance*, pp.208-222. London: Hutchinson

McVeigh, J. and Begley, E. (2016) "Anabolic Steroids in the UK: An Increasing Issue for Public Health". *Drugs: Education, Prevention and Policy*, Vol. 24(3): 278-285

Measham, F., Aldridge, J. and Parker, H. (2001) *Dancing on Drugs: Risk, Health and Hedonism in the British Club Scene*. London: Free Association Books.

Menon, D. (2003) "Successful Treatment of Anabolic Steroid-Induced Azoospermia with Human Chorionic Gonadotropin and Human Menopausal Gonadotropin" *Fertility and Sterility*. Vol. 79(3):1659–1661

Merrill, B. and West, L. (2009) *Using Biographical Methods in Social Research*. London: Sage

MHRA (2008) "Press Release: 'Tan Jab' is an Unlicensed Medicine and May Not be Safe – Warns Medicines Regulator". 17th Nov 2008. *Medicines and Healthcare Products Regulatory Agency*. Available from: <http://webarchive.nationalarchives.gov.uk/20141205150130/http://www.mhra.gov.uk/NewsCentre/Pressreleases/CON031009>

MHRA (2016) "MHRA Statement on Products Containing Cannabidiol (CBD)". 13th Oct 2016. *Medicines and Healthcare Products Regulatory Agency*. Available from: <https://www.gov.uk/government/news/mhra-statement-on-products-containing-cannabidiol-cbd>

Millar, A.P (1996) "Drugs in Sport", *The Journal of Performance Enhancing Drugs*. Vol.1(3):106-112

Miller, K. (2008) "Wired: Energy Drinks, Jock Identity, Masculine Norms, and Risk Taking" *Journal of American College Health*. Vol. 56(5):481-490

Miller, K., Melnick, M., Farrell, M., Sabo, D., and Barnes, G. (2006) "Jocks, Gender, Binge Drinking, and Adolescent Violence". *Journal of Interpersonal Violence*. Vol.21(1):105-120

Mills, C. W. (1959) *The Sociological Imagination*. Oxford: Oxford University Press

Mises, L. V. (1949) *Human Action: A Treatise on Economics* [2012 Paperback Edn]. Connecticut: Martino Fine Books

Mirror (08.02.2013) "Police Probe 'Roid Rage' Theory After 'Banned Steroids are Found at Athlete's Home". *The Mirror*. Retrieved from: <http://www.mirror.co.uk/news/world-news/oscar-pistorius-police-probe-roid-1716111>

MMAFighting.com (14.03.2013) "Dana White: UFC Random Drug Testing Impossible, But War Will be Waged on TRT Use" by Chiappetta, M. *MMA Fighting*. Retrieved from:

<http://www.mmafighting.com/2013/3/14/4106290/dana-white-ufc-random-drug-testing-impossible-but-war-will-be-waged>

MMAFighting.com (10.06.2014) "Chael Sonnen Admits to Taking Banned Substances, Calls Positive Test 'Confusing'" by Helwani, A. *MMA Fighting*. Retrieved from:

<http://www.mmafighting.com/2014/6/10/5797942/chael-sonnen-admits-to-taking-banned-substances-calls-positive-test-on-22/04/2017>

MMAFighting.com (30.03.2017) "NYSAC vague on Drug-Testing Plan for Chael Sonnen, Wanderlei Silva" by Raimondi, M. *MMA Fighting*. Retrieved from: <http://www.mmafighting.com/2017/3/30/15128722/nysac-vague-on-drug-testing-plan-for-chael-sonnen-wanderlei-silva> on 01/04/2017

MMAFighting.com (27.12.2017) "Josh Barnett fails out-of-competition drug test, flagged by USADA" by Raimondi, M. *MMA Fighting*. Retrieved from: <https://www.mmafighting.com/2016/12/27/14095672/josh-barnett-fails-out-of-competition-drug-test-flagged-by-usada>

MMAJunkie.com (01.10.2015) "50 fighters Tested by USADA Since Start of New UFC Drug Testing Program" by Marrocco, S. *MMAJunkie*. Retrieved from: <http://mmajunkie.com/2015/10/50-fighters-tested-by-usada-since-implementation-of-new-ufc-drug-testing-program> on 22/04/2017

MMAMania.com (2014) "Joe Rogan unplugged: UFC Commentator Talks TRT and PEDs in MMA in Exclusive Interview" by Roth, M. *MMA Mania*. Retrieved from: <http://www.mmamania.com/2014/3/22/5535846/joe-rogan-unplugged-ufc-commentator-trt-peds-exclusive-interview-mma>

Morrison, A., Elliott, L., and Gruer, L. (1997) "Injecting-Related Harm and Treatment-Seeking Behaviour Among Injecting Drug Users". *Addiction Journal*. Vol.92(10):1349–1352

Monaghan, L. (1999) "Challenging Medicine? Bodybuilding, Drugs and Risk". *Sociology of Health and Illness* Vol.21(6): 707-734

Monaghan, L. (2001) *Bodybuilding, Drugs and Risk*. London: Routledge

Monaghan, L. (2002*i*) "Hard Men, Shop Boys and Others: Embodying Competence in a Masculinist Occupation". *Sociological Review*. Vol. 50(3): 335-355

Monaghan, L. (2002*ii*) "Vocabularies of Motive for Illicit Steroid Use Among Bodybuilders" *Social Science and Medicine*. Vol.55: 695-708

Monaghan, L. and Atkinson, M. (2014) *Challenging Myths of Masculinity: Understanding Physical Cultures*. Burlington, VT: Ashgate

Mondenard, J. (2000) *Dopage: L'imposture des performances*. Wilmette, Ill: Chiron.

Mooney, M. and Vergel, N. (2003) *Built to Survive: A Comprehensive Guide to the Medical Use of Anabolic Therapies, Nutrition and Exercise for HIV(+) Men and Women*. United States: Program for Wellness Restoration.

Mottram, D. (Ed)(2005) *Drugs in Sport* (4th Edn). London: Routledge

Moore, K. (2005) "Sort Drugs, Make Mates': the Use and Meaning of Mobiles in Club Culture." *Consuming Music Together: Social and Collaborative Aspects of Music Consumption Technologies*. Spring, Netherlands. ISBN 1-4020-4031-8

Moore, K., and Measham, F. (2006). "Reluctant Reflexivity, Implicit Insider Knowledge, and the Development of Club Studies", in Sanders, B. (Ed.) *Drugs, Clubs and Young People*, pp. 13-25. Aldershot: Ashgate

Moore, R. (2012) *The Dirtiest Race in History: Ben Johnson, Carl Lewis and the 1988 Olympic 100m Final*. London: Bloomsbury

Moroşanu, L. (2016) "Professional Bridges: Migrants' Ties with Natives and Occupational Advancement". *Sociology*, Vol. 50(2): 349-365.

Mott, J. and Bean, P. (1998) "The Development of Drug Control in Britain" in Coomber, R. (Ed.) *The Control of Drugs and Drug Users: Reason or Reaction?* Amsterdam: Harwood

Mottram, D. R. (Ed.) (1988) *Drugs in Sport*. London: Taylor & Francis

Mottram, D. (2005) "An Introduction to Drugs and Their Use in Sport" in Mottram, D. (Ed.) *Drugs in Sport* (4th Edn). London: Routledge

Moyle, L. (2013) *An Exploration of how the Social Supply and User-Dealer Supply of Illicit Drugs Differs to Conventional Notions of Drug Dealing and Consideration of the Consequences of this for Sentencing Policy*. Plymouth: University of Plymouth

Musto, D.F. (1987) *The American Disease: Origins of American Narcotic Control*. New York: Oxford University Press

MyProtein.com (2016) "Milk Thistle Tablet". *The Hut Group*. Retrieved from: <http://www.myprotein.com/sports-nutrition/milk-thistle-tablet/11182205.html> on 03.11.2016

Neale, J., Allen, D., and Coombes, L. (2005) "Qualitative Research Methods within the Addictions". *Addiction Journal*. Vol.100(11):1584-1593.

NHS.uk (2016) "The 'Male Menopause'" *NHS Choices*, 8th April 2016. Retrieved from: <http://www.nhs.uk/conditions/Male-menopause/Pages/Introduction.aspx> on 20/07/2016

Pallone, N. and Hennessy, J. (1993) *Criminal Behavior: a Process Psychology Analysis*. New Brunswick: Transaction Publishers.

NJ Star Ledger (12th Dec 2010) "Strong at Any Cost: Legal cases linked to N.J. police who received steroids through Dr. Colao" by Brittain, A. and Mueller, M. *New Jersey Star Ledger*. Retrieved from: http://www.nj.com/news/index.ssf/2010/12/strong_at_any_cost_legal_cases.html on 10/08/2016

Nutt, D. (2012) *Drugs Without the Hot Air: Minimising the Harms of Legal and Illegal Drugs*. Cambridge: UIT

Nayak, K. and Kehily, M. (2008) *Gender, Youth and Culture: Young Masculinities and Femininities*. London: Palgrave

Olesker, M. (2015) "The Rise and Rise of the Spornosexual" *Esquire*, 12.01.2015. Retrieved from: <http://www.esquire.co.uk/culture/news/a7588/the-rise-and-rise-of-the-spornosexual/>

Onnit [Producers] (2016) "Onnit Invitational 2 with Fighter and the Kid" [Video File]. Retrieved from: <https://www.youtube.com/watch?v=OdubY9b1Ud0>

Parker, H. (2007) "Consumption Beyond Control: The Centrality of Heavy Social Drinking in the Lifestyles of English Youth". In Järvinen, M. and Room, R. (Eds.) *Youth Drinking Cultures: European Experiences*. Hampshire: Ashgate

Parker, H., Aldridge, J., and Measham, F. (1998) *Illegal Leisure: The Normalisation of Adolescent Recreational Drug Use*. London: Routledge

Parker, H. and Newcombe, R. (1987) "Heroin Use and Acquisitive Crime in an English Community". *British Journal of Sociology*. Vol.38(3):331-350

Parker, H., Williams, L., and Aldridge, J. (2002) *The Normalisation of 'Sensible' Recreational Drug Use: Further Evidence from the North West England Longitudinal Study* Sociology Volume 36(4):941–964

Perry, H. Wright, D. and Littlepage, B. (1992) "Dying to be Big: A Review of Anabolic Steroid Use" *British Journal*

of Sports Medicine. Vol. 26: 259-261

Phillips, K., and Menard, W. (2006) "Suicidality in Body Dysmorphic Disorder: A Prospective Study". *American Journal of Psychiatry*. Vol. 163(7):1280-1282

Piana, R. (Producer/Host) (2014) GHB in the 90's – Rich Piana [Video file]. Rich Piana. Retrieved from: <https://www.youtube.com/watch?v=-KGqnKR1ino> on 24/07/2016

Plant, M.A. and Plant, M.L. (1992) *Risk Takers: Alcohol, Drugs, Sex and Youth*. London: Routledge

Pope, H., and Kanayama, G. (2012). "Anabolic–Androgenic Steroids". In Verster, J., Brady, K., Galanter, M., and Conrod, P. (Eds.) *Drug Abuse and Addiction in Medical Illness: Causes, Consequences and Treatment* (pp. 251–264): Springer.

Pope H., and Katz, D. (1994) "Psychiatric and Medical Effects of Anabolic Androgenic Steroid Use: A Controlled Study of 160 Athletes. *Arch Gen Psychiatry*, Vol. 51: 375-82

Pope, H., Katz, D., Champoux, R. (1988) "Anabolic-Androgenic Steroid Use Among 1,010 College Men" *The Physician and Sportsmedicine*. Vol. 16(7): 75-81

Pope, H. G., Phillips, K. A. and Olivardia, R. (2000*i*) *The Adonis Complex: How to Identify, Treat, and Prevent Body Obsession in Men and Boys*. London: Simon & Schuster

Pope HG, Kouri EM, Hudson JI. (2000*ii*) "Effects of Supraphysiological Doses of Testosterone on Mood and Aggression in Normal Men." *Arch Gen Psychiatry*. Vol.57:133-40

Potter, E. (1989) "Differential Diagnosis of Physiological, Psychoactive and Socio-Cultural Conditions Associated with Aggression and Substance Abuse". *Journal of Chemical Dependency Treatment*. Vol.3(1):37-59

Power, M (2014) *Drugs 2.0: The Web Revolution That's Changing How the World Gets High (Updated Edition)*. London: Portobello Books

Powerliftingtown.com (2016*i*) "How to Pick the Right Powerlifting Federation". *Powerlifting To Win*. Retrieved from: <http://www.powerliftingtown.com/how-to-pick-the-right-powerlifting-federation/> on 17th March 2016

Powerliftingtown.com (2016*ii*) "Powerlifting Federations". *Powerlifting To Win*. Retrieved from: <http://www.powerliftingtown.com/powerlifting-federations/> on 17th March 2016

Powerliftinguk.com (2016) "UK Powerlifting Federations". PLUK. Retrieved from: <http://www.powerliftinguk.com/UKPowerliftingFederations> on 17th March 2016

Public Health England (2015) *Providing Effective Services for People Who Use Image and Performance Enhancing Drugs*. Available from: <http://www.nta.nhs.uk/uploads/providing-effective-services-for-people-who-use-image-and-performance-enhancing-drugs.pdf>

Putnam, R. (2001) *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon and Schuster

Readhead, S. (1990) *The End-of-the-Century Party: Youth and Pop Towards 2000*. Manchester: Manchester University Press

Ridley, M. (1994) *The Red Queen: Sex and the Evolution of Human Nature*. London: Penguin.

Rippetoe, M. and Kilgore, L. (2007) *Starting Strength: Basic Barbell Training* (2nd Edn.). Texas: Aasgaard

Ritsch, M. and Musshoff, F. (2000) "Dangers and Risks of Black Market Anabolic Steroid Abuse in Sports: Gas Chromatography-Mass Spectrometry Analyses" [German]. *Sportverletz Sportschaden*. Vol.14(1):1-11.

Rockhold, R. (1993) "Cardiovascular Toxicity of Anabolic Steroids". *Annual Review of Pharmacology and Toxicology*. Vol. 33: 497-520

Rogan, J. [Producer/Host] (2015*i*) *The Joe Rogan Experience #611 – Josh McDermitt* [Audio Podcast]. PowerfulJRE. Available from: <https://www.youtube.com/watch?v=uOj9XP5MrpM>

Rogan, J. [Producer/Host] (2015*ii*) *The Joe Rogan Experience #699 – Donald Cerrone* [Audio Podcast]. PowerfulJRE. Available from: <https://www.youtube.com/watch?v=aqM4E6LxMCM>

Rogan, J. [Producer/Host] (2016*i*) *The Joe Rogan Experience #822 – Chael Sonnen* [Audio Podcast]. PowerfulJRE. Available from: <https://www.youtube.com/watch?v=rAnLPKGbytU>

Rogan, J. [Producer/Host] (2016*ii*) *The Joe Rogan Experience #857 – Dan Bilzerian* [Audio Podcast]. PowerfulJRE. Available from: <https://www.youtube.com/watch?v=RX5Iw-XsWu4>

Rogan, J. [Producer/Host] (2017*i*) *The Joe Rogan Experience #893 – Fight Recap* [Audio Podcast] PowerfulJRE. Available from: <https://www.youtube.com/watch?v=l5rwlv41ACM>

Rogan, J. [Producer/Host] (2017*ii*) *The Joe Rogan Experience #900 - Joseph Valtellini* [Audio Podcast] PowerfulJRE. Available from: <https://www.youtube.com/watch?v=UINvTTfUJ1A>

Rogan, J. [Producer/Host] (2017*iii*) *The Joe Rogan Experience #989 – Dorian Yates* [Audio Podcast] PowerfulJRE. Available from: <https://www.youtube.com/watch?v=cu-7WSjaVyU>

Rowe, R., Berger, I., and Copeland, J. (2016) "No Pain, No Gainz'? Performance and Image-Enhancing Drugs, Health Effects and Information Seeking" *Drugs: Education, Prevention and Policy*. <http://dx.doi.org/10.1080/09687637.2016.1207752>

Royal Berkshire NHS (2016) "Hypogonadism and testosterone replacement therapy". *NHS Foundation Trust*. Retrieved from: <http://www.royalberkshire.nhs.uk/patient-information-leaflets/Hypogonadism> on 20/07/2016

Sagoe, D. (2015) *Non-Medical Anabolic-Androgenic Steroid Use: Prevalence, Attitudes and Social Perception*. Bergen: University of Bergen

Sagoe, D., McVeigh, J., Bjørnebekk, A., Essilfie, M., Andreassen, C., Pallesen, S. (2015) Polypharmacy Among Anabolic Androgenic Steroid Users: A Descriptive Metasynthesis. *Substance Use, Treatment, Prevention & Policy*. Vol. 10(12)

Scholes-Balog, K., Hemphill, S., Kremer, P., and Toumbourou, J. (2016) "Relationships Between Sport Participation, Problem Alcohol Use, and Violence: A Longitudinal Study of Young Adults in Australia" *Journal of Interpersonal Violence*. Vol. 31(8): 1501-1530

Schweitzer, A. (1952) *African Notebook* (2002 Edition, Translated by Russell, C.) New York: Syracuse University Press

Semmler, J. and Enoka, R. (2000) "Neural Contributions to Changes in Muscle Strength" in Zatsiorsky (Ed) *Biomechanics in Sport: Performance Enhancement and Injury Prevention*. Oxford: Blackwell

Shaw, C. (1927) "Case Study Method" *American Sociological Society*. Vol.21:149-157

- Shaw, C. (1930) *The Jackroller: A Delinquent Boy's Own Story*. Chicago: University of Chicago Press
- Shaw, C., and McKay, H. (1942) *Juvenile Delinquency and Urban Areas*. Chicago: University of Chicago Press.
- Sherdog.com (11.01.2010) "Sherdog's Event Of The Year" by Savage, G. *Sherdog News*. Retrieved from: <http://www.sherdog.com/news/articles/1/Sherdogs-2009-Misc-Awards-22093> on 22/04/2017
- Shulgin, A. (1991) *PIHKAL – Phenethylamines I Have Known And Loved: A Chemical Love Story*. California, United States: Transform Press
- Silverstone, D. (2006) "Pub Space, Rave Space and Urban Space: Three Different Night-Time Economies" in Sanders, B. (Ed.) *Clubs, Drugs, and Young People: Sociological and Public Health Perspectives*. Aldershot: Ashgate
- Simmonds, L. and Coomber, R. (2009) "Injecting Drug Users: A Stigmatised and Stigmatising Population". *International Journal of Drug Policy*. Vol.20:121–130
- Simon, H. A. (1956) "Rational Choice and the Structure of the Environment". *Psychological Review*. Vol.63(2):129–138.
- Sonnen, C. (2012) *The Voice of Reason*. United States: Victory Belt Publishing.
- Sonnen, C. [Producer/Host] (2016) *Fan Questions Answered Here (Beyond the Fight: Episode 48)* [Audio Podcast] Bad Guy Inc. Retrieved from: <https://www.youtube.com/watch?v=BdwWISbNo3w>
- Stanley, L. (1990) "Feminist Auto/Biography and Feminist Epistemology", in Jane, A. and Walby, S. (Eds) *Out of the Margins: Women's Studies in the Nineties*. London: Falmer
- Stanley, L. and Wise, S. (1990) "Method, Methodology and Epistemology in Feminist Research Process", in Stanley, L. (Ed) (1990) *Feminist Praxis: Research, Theory and Epistemology in Feminist Sociology*. London: Routledge.
- Steroid.com (2006) "Tren Rage" by rhino1, 12th August 2006. Retrieved from: <http://forums.steroid.com/anabolic-steroids-questions-answers/274864-tren-rage.html> on 20/07/2016
- Stettler, J. (2013) *Advanced Chemical Warfare: Unlocking the Keys to Rapid Muscle Gains Using Anabolic Steroids*. Great Britain: Brotherhood of Iron Publications
- Sullivan, P. (1995) "Mortality in Anorexia Nervosa" *American Journal of Psychiatry*. Vol.152(7):1073-74
- SuperiorMuscle.com (2012) "The Laws of Tren" by Bouncer, 1st Dec 2012. Retrieved from: <http://www.superiormuscle.com/forums/anabolic-steroids/56775-laws-trenon> 30/08/2016
- Sutherland (1947) *Principles of Criminology* (4th Edn.). Philadelphia: J.P. Lippincott
- Sydney Morning Herald (2014) "Sydney Crime: Growing Drug Link to Violent Assaults" by Olding, R. *Sydney Morning Herald*, 10th January 2014. Retrieved from: <http://www.smh.com.au/nsw/sydney-crime-growing-drug-link-to-violent-assaults-20140109-30kkt.html>
- T-Nation (2013) "Low Test/High Tren Cycle: Pharma" by JKriminal, 29th Nov 2013. Retrieved from: <https://forums.t-nation.com/t/low-test-high-tren-cycle/196179> on 18/08/2016
- Taleb, N. N. (2012) *Antifragile: Things that Gain from Disorder*. Penguin.
- Taylor, J. (2011) "The Intimate Insider: Negotiating the Ethics of Friendship When Doing Insider Research".

Taylor, M. and Potter, G. (2013) "From 'Social Supply' to 'Real Dealing': Drift, Friendship, and Trust in Drug-Dealing" *Journal of Drug Issues* Vol.43(4):392

Telegraph (22.04.2015) "Disgraced Drug Cheat Lance Armstrong says he Owes WADA an Apology for Cheating". *Telegraph Sport*. Retrieved from: <http://www.dailystreet.com.au/sport/more-sports/disgraced-drug-cheat-lance-armstrong-says-he-owes-wada-an-apology-for-cheating/news-story/98e20ad40e57cce3fdc5f79e0c692ef> on 22/04/2017

Telegraph (11.07.2016) "UFC Sold for Four Billion Dollars" by Davies, G. *Telegraph Sport*. Retrieved from: <http://www.telegraph.co.uk/mma/2016/07/11/ufc-sold-for-four-billion-dollars/> on 22/04/2017

ThinkSteroids.com (2004) "Tren Rage" by plmuscle, 21st April 2004. Retrieved from: <https://thinksteroids.com/community/threads/tren-rage.13133/> on 20/07/2016

ThinkSteroids.com (2014) "My Low Test to High Tren Experience" by 'Ravtech', 3rd April 2014. Retrieved from: <https://thinksteroids.com/community/threads/my-low-test-to-high-tren-experience.134353267/> on 18/08/2016

ThinkSteroids.com (2016) "Steroid Profile: Deca Durabolin (Nandrolone Decanoate)" by Roberts, B. Retrieved from: <https://thinksteroids.com/steroid-profiles/deca-durabolin/> on 15/08/2016

Times (19.08.2017) "Men Turn to Steroids in Pursuit of Love Island Body" by Ford, R. *The Times* [Print Edition]: 20

Thornton, S. (1995) *Club Culture: Music, Media and Subcultural Capital*. Cambridge: Polity Press.

Times Magazine (29.10.2016) "Goodbye Waif - Hello Weights" by S. Williams. *The Times* [Print Edition]: 24-33

Todd, T. (1987) "Anabolic Steroids: The Gremlins of Sport", *Journal of Sport History*. Vol.13:87-107

Tonry, P., and Wilson, J. (Eds) (1990) *Drugs and Crime*. Chicago: University of Chicago Press

Torre, C. (2009) "Syringe Exchange Programmes in the Context of Harm Reduction". *Arquivos de Medicina*. Vol. 23(3):119-31. Available from: <http://www.scielo.mec.pt/pdf/am/v23n3/v23n3a04.pdf>

Trenton, A. and Currier, G. (2005) "Behavioural Manifestations of Anabolic Steroid Use" *CNS Drugs*. Vol.15(7):571-595

Turvey, B. and Crowder, S. (2015) *Anabolic Steroid Abuse in Public Safety Personnel: A Forensic Manual*. London: Elsevier

UFC - Ultimate Fighting Championship [YouTube Channel] (21st Aug 2016) "UFC 202: Nate Diaz Post-Fight Press Conference" [Video Clip]. Retrieved from: https://youtu.be/GC-_qbmdrlQ?t=11m57s on 23/02/2017

UK-Muscle (28th Sept. 2009) "How Dangerous is Blasting and Cruising" by Baz1983, 28th Sept 2009. Retrieved from: <http://www.uk-muscle.co.uk/topic/70188-how-dangerous-is-blasting-and-cruising/> on 23/10/2016

UK-Muscle (1st Feb 2010) "Blast/Cruise vs Cycling" by BigDom86, 1st Feb 2010. Retrieved from: <http://www.uk-muscle.co.uk/topic/80485-blastcruise-vs-cycling/> on 23/10/2016

UK-Muscle (14th Feb 2012) "High Tren, Low Test Cycle" by Keano, 14th Feb 2012. Retrieved from: <http://www.uk-muscle.co.uk/topic/145407-high-tren-low-test-cycle/> on 18/08/2016

Underwood, M. (2017) "Exploring the Social Lives of Image and Performance Enhancing Drugs: An Online Ethnography of the Zyzz Fandom of Recreational Bodybuilders". *International Journal of Drug Policy*, Vol. 39: 78–85

Van Hout, M.C., and Bingham, T. (2013) "'Silk Road', the Virtual Drug Marketplace: A Single Case Study of User Experiences". *International Journal of Drug Policy*: <http://dx.doi.org/10.1016/j.drugpo.2013.01.005>

Vaughn, M.S., and Sapp, A.D. (1989) "Less than Utopian: Sex Offender Treatment in a Milieu of Power Struggles, Status Positioning, and Inmate Manipulation in State Correctional Institutions". *The Prison Journal*. Vol. 69(2):73–89.

Veblen, T. (1899) *The Theory of the Leisure Class*. New York: MacMillan

Verokken, M. (2005) "Drug Use and Abuse in Sport" in Mottram, D. R. (Ed.) *Drugs in Sport* (4th Edn). London: Taylor & Francis:18-55

Venkatesh, S. (2008) *Gang Leader for a Day*. London: Penguin.

Venkatesh, S. (2013) *Floating City: Tales from Inside New York's Underground Economy*. London: Penguin

Volpi, R., Chiodera, P., Caffarra, P., Scaglioni, A., Malvezzi, L., Saginario, A., Coiro, V. (2000) "Muscarinic Cholinergic Mediation of the GH Response to Gamma-Hydroxybutyric Acid: Neuroendocrine Evidence in Normal and Parkinsonian Subjects". *Psychoneuroendocrinology* Vol. 25(2):179-185

Voy, R. (1991) *Drugs, Sport, and Politics*. Champaign, Illinois: Leisure Press.

Waddington, I. (2000) *Sport, Health and Drugs: A Critical Sociological Perspective*. London: Taylor & Francis

Walsh, D. (2007) *From Lance to Landis: Inside the American Doping Controversy at the Tour de France*. New York: Ballantine.

Walter, N. (2011) *Living Dolls: The Return of Sexism*. London: Virago

Warren, C. (2004) "Interviewing in Qualitative Research" in Lewis-Beck, M., Bryman, A., and Futing Liao, T. (Eds.) *The SAGE Encyclopaedia of Social Science Research Methods*. London: SAGE

Watson, J. (2000) *Male Bodies: Health, Culture and Identity*. Buckingham: Open University Press.

Wedgwood, N. (2009) "Connell's Theory of Masculinity – Its Origins and Influences on the Study of Gender", *Journal of Gender Studies*, Vol. 18(4): 329-339

Wernick, R. (1979) *The Vikings*. Alexandria, VA: Time-Life Books.

Wertheim, L. (2009) *Blood in the Cage: Mixed Martial Arts, Pat Miletich, and the Furious Rise of the UFC*. Dublin: Houghton Mifflin Harcourt

Westerdahl, J., Ingvar, C., Måsbäck, A., Jonsson, N., and Olsson, H. (2000) "Risk of Cutaneous Malignant Melanoma in Relation to Use of Sunbeds: Further Evidence for UV-A Carcinogenicity" *British Journal of Cancer*. Vol. 82(9):1593–1599.

Williams, M. (2003) *Making Sense of Social Research*. London: Sage.

Williamson, D.J. (1993) "Anabolic Steroid Use Among Students at a British College of Technology" *British Journal of Sports Medicine*, Volume 27(3): 200-201

Willis, P. (1977) *Learning to Labour*. Farnborough: Gower.

Winstock, A. (2000) "Risky Behaviour and Harm Reduction Amongst 1151 Clubbers". Paper to 11th International Conference on the Reduction of Drug Related Harm, Jersey.

Wise, J. (2009) *Extreme Fear: The Science of Your Mind in Danger*. New York: St. Martin's Press

Wu, F. (1997) "Endocrine Aspects of Anabolic Steroids" *Clinical Chemistry*. Vol. 43(7):1289-1292

Yesalis, C., Kennedy, N., Kopstein, A., and Bahrke, M. (1993) "Anabolic-Androgenic Steroid Use in the United States". *Journal of the American Medical Association*. Vol.270:1217-1221

Young, J. (1971) *The Drugtakers: The Social Meaning of Drug Use*. London: MacGibbon and Kee

Åkerström, M. (1986) "Outcasts in Prison: The Cases of Informers and Sex Offenders". *Deviant Behavior*. Vol.7(1):1–12.

Glossary

This thesis uses a number of terms specific to PIED-using subcultures. They are listed here as a reference tool for the lay reader, along with other relevant acronyms and abbreviations.

AAS – *Anabolic-androgenic steroids (“steroids”). The most commonly-referenced form of PIED in this research.*

ACMD – *Advisory Council on the Misuse of Drugs. UK government agency.*

Anadrol – ‘Oxymetholone’, *an anabolic-androgenic steroid. Anadrol is considered a ‘hard’ steroid, and comes in pill or capsule form.*

Anavar – ‘Oxandrolone’, *an orally-active anabolic-androgenic steroid. Anavar is generally considered a “milder” steroid, and comes in pill or capsule form.*

“Bathtub brew” – see UGL.

BJJ – *Brazilian jiu jitsu, a ground-based form of submission grappling derived from judo. Commonly practiced by MMA fighters.*

Blast and cruise – *The process of using steroids continuously without ceasing use of testosterone between ‘cycles’. May alternatively be called “always on”.*

Blend – *A mixture of steroids ‘blended’ in a single vial. Most ‘blends’ contain different esters of the same steroid (e.g. testosterone-enanthate blended with testosterone-cypionate), however some ‘custom blends’ are marketed for specific purposes, such as ‘shredders’ containing a mix of testosterone and trenbolone, for example. The latter are generally only utilised by image-oriented trainers, with sport-oriented users tending to prefer to decide dosages of each component for themselves separately, although some bodybuilders are noted as preferring blends (chapter six).*

Bodybuilding – *The sport (and lifestyle) of creating an impressive physique for show in contest with other physique-builders. Strongly associated with PIED use.*

“Bold” – *Boldenone, an injectable steroid favoured by powerlifters. Boldenone is used for injury repair and strength gain, and has a long ‘half-life’.*

“Breaker” – or ‘breakdancer’, *an individual who participates in breakdancing, a form of athletic, freestyle dancing.*

“Brewing” – see ‘UGL’.

CBD – *Cannabidiol: A cannabis oil extract that offers the healing properties of cannabis without the THC-based “high”. Either “vaped” or taken sub-lingually.*

Clenbuterol – *Illicit (class C) fat loss drug with stimulant and thermogenic properties. Frequently utilized by bodybuilders for some time (see Monaghan 2001), the drug is now often recommended by personal trainers, and taken by image-oriented users.*

Clomid – *Clomifene citrate, an orally administered drug that causes the body to release gonadotropin, the active compound in HCG. Might be used by some as an alternative to HCG, likely split along subcultural lines (powerlifters favour injectable HCG).*

CNS – Central nervous system. Powerlifting routines will generally plan around ‘CNS fatigue’, in addition to the muscle fatigue for which bodybuilders and image-oriented trainers must also account. Powerlifters therefore plan prolonged periods of rest into their training schedules to allow their CNS to recover.

Coke – Slang term for ‘cocaine’, a powerful stimulant “club drug”.

Commercial gym – A gym space that caters to non-competitive users. Will generally have a broad range of cardio and weights machines, with a limited amount of free weights. With the rise of the ‘workout culture’ and ‘Crossfit’, some commercial gyms are beginning to install more free-weight sections to cater to this new market. Personal trainers are prevalent in commercial gyms.

Crossfit – A strength and endurance-oriented form of training similar to a milder version of ‘strongman’, notably with more female competitors. Advertised to the middle-classes as a “tough” leisure activity, participants are overwhelmingly represented on social media, indicating an ‘hedonic’ element to this sporting activity.

“Cycle” – The process of taking steroids for a period of some weeks or months, then having a period of rest during which one does not take steroids, before commencing the next ‘cycle’. Users can be described as ‘on-cycle’ or ‘off-cycle’, depending on their position in this sequence.

DBol – Methandienone, an orally-active anabolic-androgenic steroid. DBol is a common ‘oral’, used for adding mass, and is ‘intermediate’ in strength and side-effects for an oral. It comes in pill or capsule form.

“Deca” – Nandrolone-decanoate, an injectable anabolic-androgenic steroid popular amongst ‘old school’ bodybuilders. ‘Deca’ was considered a ‘milder’ steroid by Monaghan’s (2001) respondents, although its position in modern competitive users’ ethnopharmacological taxonomy is shifting towards being seen as a ‘hard’ drug (chapter seven). Also called “Deca-durabolin”.

ECA – Ephedrine, caffeine, aspirin. A combination of legal, over-the-counter drugs (ephedrine being available in ‘ChestEze’ prior to August 2015) that is utilized for fat loss purposes by both bodybuilders, and image-oriented (particularly hedonic) users.

Epo – Erythropoietin, a drug that increases red blood cell production, thus increasing endurance. Commonly used in professional cycling. Also called ‘r-epo’ (recombinant-erythropoietin).

Equipoise – Alternate name for boldenone-undecylenate, long-ester version of “bold”.

Ester – Many steroids are available with different ‘esters’, which affect intensity, and duration of product in the system e.g. testosterone-propionate (short-ester) versus testosterone-cypionate (long-ester).

“Gear” – Generic term for PIEDs, generally used to mean anabolic-androgenic steroids. “Geared” may be used to mean “on PIEDs”.

GHB - Gamma-hydroxybutyric acid, a psychoactive drug that was popular amongst bodybuilders in the 1990s for its hypnotic and repair-enhancing effects.

Grappling – A sport in which 2 individuals attempt to ‘submit’ one another with a variety of joint locks and chokes. Also known as ‘submission wrestling’, ‘catch-as-catch-can wrestling’. See BJJ.

“Gym rat” – An individual who trains to look more imposing without any defined sporting or self-improvement goal in mind. Generally also associated with a lack of sophistication in training, and usually identifiable by their backwards snap-caps and string vests. Hedonic young male users. Also termed “curlbros”, “meat-heads”, etc.

Half-Life – The period it takes for the active levels of a compound in one's system to reduce by half, e.g. the time required following injection for 400mg of testosterone to drop to an effective dose of 200mg in the blood. Varies by drug.

'Hardcore' gym – A gym environment with many free-weights, but generally few machines. Caters to bodybuilders, powerlifters, strongmen, etc. Chalk is generally allowed, as is grunting and slamming weights. Although generally there is no restriction on who can join, these gyms are overwhelmingly populated by 'competitive' trainers. 'Crossfit' gyms often share elements of 'hardcore' environments, although will cater to a more social media-oriented class of trainer (see 'Crossfit').

Hedonic user – Individuals who take PIEDs for the purpose of looking good for reasons relating to the perceptions of others, whether for "Likes" on social-media, or obtaining a higher standing in the sexual marketplace. Generally split between social-media focussed 'workout culture', and party/nightclub-oriented 'lad culture'.

HCG – Human Chorionic-Gonadotropin. An injectable hormone generally used as a steroid accessory drug, to encourage one's natural testosterone production to restart following a cycle (see Evans 1997).

MDMA – 3,4-Methylenedioxymethamphetamine, a popular psychedelic "club drug" with a powerful stimulant effect that also acts as an empathogen–entactogen. Also called "ecstasy" or "Molly".

HGH – Human Growth Hormone. Also referred to as 'GH', or 'Growth'.

IDU – Injecting Drug User

'Injectables' – PIEDs that are administered by injection, usually intramuscular. Generally used to refer to injected steroids, but could also refer to PIEDs such as human growth hormone in the context of contrasting with 'orals'.

"Lad culture" – A subset of hedonic users that in addition to a focus on social media and image also participates in binge-drinking culture, often coupled with illicit drug use and sexual licentiousness. The "summer in Ibiza" set.

Melanotan – Tanning drug frequently utilised by hedonic users and bodybuilders as part of their image-creation regimen. MHRA suggests might have severe side-effects.

Melatonin – Restricted medicine that facilitates the onset and of high-quality sleep.

MHRA - Medicines and Healthcare Products Regulatory Agency. UK government agency responsible for the regulation of medicines.

Milk Thistle – An herbal supplement believed to aid liver function.

MMA – Mixed Martial Arts. A fighting sport in which individuals are scored for their striking, wrestling and grappling abilities. Also called "cage fighting", although this is generally applied pejoratively.

'Nolva' – Nolvadex. Trade name for tamoxifen.

Nubain – Nalbuphine, an opioid drug popular with bodybuilders in the 1990s for its pain reducing effects.

NSP – Needle and Syringe Program. A harm-reduction policy introduced to reduce risks inherent with Injectable Drug use. Users can get clean needles and syringes free from such programs.

"Oestrogen Blockers" – Oestrogen agonists, steroid accessory drugs utilised to prevent side-effects from the increase in oestrogen levels associated with steroid use.

"Orals" – Alkylated or methylated anabolic-androgenic steroids that are active when taken orally, generally

in pill or capsule form.

Ostarine – *Enobosarm*, a SARM utilised to reduce muscle loss after cycling-off steroids. Ostarine is a fairly new compound, and just emerging in competitive sporting, and ‘Crossfit’ gyms.

PCT – *Post-Cycle Therapy*: the regimen of steroid accessory drugs utilised in the period immediately following a steroid ‘cycle’, generally as a means of ‘reactivating’ one’s natural testosterone production, and decreasing one’s oestrogen levels. Drugs used may include tamoxifen, HCG, ostarine or others.

PIED – *Performance and Image Enhancing Drug*. Sometimes referred to as IPED (e.g. Bates and McVeigh 2016), or simply “PED”.

“Pharma” – PIEDs of pharmaceutical quality. Often created in legitimate pharmaceutical labs overseas, in regions such as Eastern/Southern Europe and China. Some “Pharma” products are in fact UGLs (see below) with false branding claiming they are “Pharma”, such as the ‘GB Pharma’ brand (see Llewellyn and Tober 2010).

Powerlifting – *Competitive sport in which an individual performs three lifts, attempting to lift the maximum weight they can for each. The three powerlifts are the squat, bench-press, and deadlift.*

PT – *Personal Trainer*.

“Roid rage” – *Outbursts of aggression attributed to an effect of AAS use.*

SARM – *Selective Androgen Receptor Modulator*. SARMS are targeted androgenic drugs with similar anabolic effects to steroids, though are sometimes preferred because they are not associated with “shut down” of the testes, meaning they can be used during one’s PCT period.

Saw Palmetto – *An herbal supplement believed to aid prostate function*

SERM – *Selective Estrogen Re-uptake Modulator* – technical term for “oestrogen blockers”.

“Shredder” – A PIED (generally steroid) renowned for helping achieve the low-bodyfat, low water-weight look referred to as ‘shredded’ (i.e. very lean whilst carrying a significant amount of muscle). e.g. trenbolone-acetate.

“Stack” – *The process of using multiple steroids simultaneously, generally on a ‘cycle’. Users believe ‘stacking’ improves gains, whilst also decreasing side-effects compared to using large quantities of a single compound. Testosterone almost always forms the ‘base’ of a ‘stack’, with different products added depending on the desired goal (e.g., ‘DBol’ for size and strength, vs ‘Tren’ to get ‘lean’ or ‘shredded’ whilst still gaining strength).*

Steroid – *Shortened version of anabolic-androgenic steroid. See AAS.*

‘Strongman’ – *A sport in which competitors perform varying feats of strength and endurance, scoring points based on where they place in each event, with the highest scorer after a set number of events being declared “Strongest man”.*

Tamoxifen – *A popularly-utilised SERM.*

“Test” – *Generic term for injectable testosterone. May be followed either by an ester length (e.g. “test prop”), or a concentration (e.g. “Test400”, meaning a strength of 400mg/ml).*

Tren – *Trenbolone, a “hardcore” steroid, and veterinary compound usually taken by injection (Trenbolone-acetate). The name is also often applied to methyltrienolone, sometimes called “oral tren”.*

UFC – *Ultimate Fighting Championship: The leading Mixed Martial Arts federation worldwide.*

UGL – “Underground Lab”, a location “brewing” steroid powders into oil for sale locally. Non-pharmaceutical in nature, and vary depending on the skill of those involved in the operation (see Llewellyn and Tober 2010). The worst UGLs are termed sometimes termed “bathtub brew”, to reflect the fact they are simply made in a supplier’s bathroom, rather than a ‘clean-room’.

Weed – Slang term for cannabis.

‘Workout Culture’ – Generic term for individuals who train for the purposes of showing off the results of training on social media. This can either be individuals who post images of their body to these platforms, or individuals such as ‘Crossfit’ participants who will post clothed pictures of themselves lifting large amounts of weight, in both cases for social approval. Includes as a subset the ‘Spornosexual’ (Olesker 2015).

Wrestling – A sport in which an individual attempts to take their opponent to the ground and ‘pin’ them. ‘Entertainment wrestling’ adapts this into a show with larger-than-life characters and story-arcs, and often includes striking and use of weapons to increase drama.

Notes

¹ 9.3 percent of respondents had a primary motivation listed as “other” (p.4), which might include sport-specific focus, however with 71 percent primarily giving image-oriented goals, this form of use still clearly forms a majority.

² Whilst there is reason to resist applying terms such as ‘hedonic’ to drug-using subcultures, in light of the resistance to political and class situations that often frame such lifestyles (Redhead 1990), for the purposes of categorisation this term is both expedient and descriptive, and further has some grounding in the existing youth culture literature (Plant and Plant 1992; Measham *et al.* 2001), making it a practical term with which to describe this subset of users.

³ Interestingly, the term *doping* may be derived from the name of the drug for which the first known disqualification in a sporting event was given. This occurred in Amsterdam in 1865, when swimmers in a canal race were charged with taking ‘*dop*’, a stimulant-liquor used by the native Kaffir tribesmen in Dutch South Africa (Voy 1991). Owing to the anomaly of this disqualification occurring during a period when performance-enhancement was considered “part and parcel” of competition (Coomber 1993), it seems probable this action was grounded in xenophobic attitudes, tied to the drug’s associations with native African tribesmen, as seen in many of the restrictions brought in against ‘recreational’ drugs later (Blackman 2004; Barton 2011; Musto 1987), rather than any desire to keep sporting ‘fair’, or protect the health of athletes, as later regulations would claim (Coomber 1993; Voy 1991; Black 1996).

⁴ The 1868 Pharmacy Act being the first example of such a control (see Barton 2011)

⁵ Although the UFC technically had ‘in-competition’ testing at this time, this was regarded by many athletes as a licence to use freely outside of competition (see Sonnen 2016; Wertheim 2009). Former heavyweight champion Josh Barnett’s being allowed to continue competing after failing three separate drug tests supports this analysis of the relaxed attitude of the organisation towards PIED use (MMAFighting 27.12.2017).

⁶ Much of Connell’s work was published under the name ‘Robert’, however to reflect Connell’s wishes (as articulated in Wedgwood (2009)), this piece shall use her desired name and pronouns when referring to work from this earlier period.

⁷ Although there has been some criticism of the term, and concept of ‘subcultures’, with some sociologists preferring to deal in concepts such as ‘tribes’ or ‘neo-tribes’ (Maffesoli 1996), ‘lifestyles’ (Clarke 1982), or ‘youth cultures’ centred on ‘status positions’ (Blackman 1995), this thesis will in chapter five apply learning theories associated with ‘subcultural’ theorists, which remain appropriate to analysis of such groups, regardless of terminology. Since this work seeks to maintain a consistent use of terminology, identifying both broad ‘categories’ of users (sport-oriented/image-oriented), as well as specific social groups of users (e.g. powerlifters/‘lad culture’), the term ‘subculture’ is used throughout in reference to the latter (see Blackman (2005) for a critical overview of youth subcultural theories).

⁸ ‘Data saturation’ was normally determined for tape-recorded interviews as the point at which all the formal written questions had been answered, and all inductive paths of inquiry based off the interviewee’s conversational elaborations had been explored. Occasionally, interviewees had time constraints, or did not wish to answer specific questions, in which case data sampling ended at the point the researcher could not gather any more within the bounds of these constraints. For unrecorded interviews, questioning was more direct, with less elaboration, a reason for the differentiation between these two forms of data in citations made in the thesis.

⁹ *Time-preference* is an economic concept, described by Mises in *Human Action* (1949). Time-preference is there described as “the value of time, i.e., time preference or the higher valuation of want-satisfaction in nearer periods of the future as against that in remoter periods” (p.490). In economic terms, an individual with a high time-preference will be more inclined to consume in the present, whilst an individual with low time-preference will be more inclined to invest in the present, to consume a greater amount in the future. In effect, the lower one’s time-preference, the greater one’s ability to delay gratification.

¹⁰ As a private contractor.

¹¹ Additionally, In the powerlifting gym where I interviewed Rose, I was also accepted owing to my subcultural capital as a former competitor, another factor differentiating these gyms from ‘commercial’ gym environments.

¹² 4.4% of young males interviewed by Williamson (1993) had used PIEDs, 56% of those at the age of 15 or younger.

¹³ Blackman (2004) notes how “in free market capitalism we find a range of drug representations employed by entrepreneurs to capture a market. The drugs economy remains illegal but it’s commercial cultural support systems are highly profitable and legitimate” (p.52). This captures the dichotomy between the promotion of the PIED-enhanced body in film and advertisements, alongside the condemnation of sportsmen caught using PIEDs, seen in the media today.

¹⁴ Measham *et al.* (2001) document this phenomenon of a perceived social hierarchy of drug users in relation to dance drug users, noting that the “going out” population was “distinguished and distinguishable from most problem drug users by social class, employment and education, criminality...” (p.11), although noted that use of cocaine amongst dance drug users led to some blurring of lines with ‘hard’ drug users. It is interesting to note the overlap between this “going out” youth culture of the 1990s, and the party and nightclub-oriented PIED-using “lad culture”, suggesting even this PIED-using subculture, perceived by ‘competitive’ users as problematic (see chapter seven), may be distinguished from ‘problem’ drug users, in the manner described by Measham *et al.* (2001).

¹⁵ Michael Bay’s black comedy film ‘Pain and Gain’ (2013), for example, includes depictions of a bodybuilder prone to “roid rage”. This is somewhat ironic, given the cast is led by Dwayne ‘The Rock’ Johnson, who has certainly used PIEDs at some point.

¹⁶ Haidt (2012) describes and gives numerous examples of the process of ‘rationalising aversion’.

¹⁷ Although as Mariusz’s quotes indicate, there are clearly some PIED-using powerlifters who are happy to compete in ‘tested’ federations, indicating that disdain for this practice is by no means universal across this subculture (though the attempt to hide it does suggest a certain cultural stigma).

¹⁸ Monaghan (2001) notes that some bodybuilders had begun using PIEDs immediately upon beginning training, which some of the more serious competitors did not support, though were seemingly more tolerant to this practice than the Powerlifters interviewed in the present research. This perhaps evidences the concept of a spectrum of use, with the function-oriented powerlifters more starkly divided from casual image-focussed users than competitors in the image-focussed sport of bodybuilding (as shall later be addressed).

¹⁹ BJJ in Brazil is notoriously PIED-filled (Deephalf.com 20.12.2016).

²⁰ Mikey and Rose both cite an HGH dose of 2iu as the quantity utilized for repair and maintenance, whilst Rich admitted to using up to “5iu” per day (‘Rich’, interview). This likely indicates the difference in quantities required for ‘health and maintenance only’ vs ‘repair and muscular strength increase’, although Rich as a powerlifter is naturally significantly heavier, which might also affect dosing (see Llewellyn 2011).

²¹ Although as Blackman (2004:165) notes, one should keep in mind that the concept of ‘peer pressure’ is a negative phrase that defines young people as vulnerable to coercive persuasion, whilst ignoring the positive motivations for drug use that young people may have. Whilst ‘peer influence’ is worth accounting for, therefore, it must not be considered a motivation in-and-of itself, as a simplified view of ‘peer pressure’ might suggest (e.g. Josh’s smoking scenario).

²² Although some females use PIEDs for the purposes of aesthetic enhancement to increase sexual desirability (Times Magazine 29.10.2016), none were interviewed in this ethnography, so this area is described solely in terms of intra-male competition.

²³ It is highly likely this personal trainer has his training practice registered as a business, and got the car on a ‘business lease’ contract, rather than actually bought it. In terms of a conspicuous lifestyle accessory, however, this would perhaps be an even clearer example than simply owning the car, as it would mean he is using long-term rentals to appear to live beyond his actual means.

²⁴ Whilst powerlifters were ‘orthodox’ in their masculinity, and sexuality, it is worth noting that MMA fighter ‘Chris’ openly bragged about visiting prostitutes in Amsterdam, and was more open about his sexual proclivities than members of the other sport-oriented subcultures interviewed. This indicates that the spectrum of drug users, from ‘hardcore’ to ‘hedonic’, is not necessarily a direct mirror of conceptions of masculinity, from ‘orthodox’ to ‘lad’, as indeed Anderson’s (2009) exploration of a rugby team would seem to indicate. This does not however invalidate the inferences drawn relating to the position of sex as a motivation amongst hedonic users, since as noted these

motivations must be understood through the lens of subcultural ideals and practice (with ‘no strings attached’ sex not being a key feature of MMA culture, in contrast to ‘hedonic’ subcultures, with ejaculation in the weeks leading up to a fight in fact being frowned upon, for its supposed effects on diminishing testosterone).

²⁵ Winstock (2000) identified use of stimulant drugs specifically as a weight loss measure amongst dance club populations, suggesting some image-oriented nature to this hedonic culture even in the 1990s. This evidences the suggestion that ‘lad culture’ might in some ways be a more image-conscious evolution of earlier hedonic nightlife cultures, a suggestion that shall be discussed further later in the chapter.

²⁶ Indeed, the popular television show *Geordie Shore* (2011) was created as a British version of Jersey Shore, following the latter’s success amongst British audiences. The proximity of this to the rapid growth in PIED use amongst young British men (Bleeker 2014; Bates and McVeigh 2016) is likely significant.

²⁷ For both personal trainers, and sponsored athletes and models, it is interesting to note the way in which a growing youth culture of drug consumption has led to the creation of what McRobbie (1999) described, in relation to the commercialisation of dance drug cultures, as a “new job creation scheme for working class young men, and to a lesser extent young women, with few qualifications but plentiful (self-taught) technical skills and experiences” (p.41). This can be related back to Blackman’s (2004) theories of the deliberate commercialisation of youth cultures by free market enterprise, thus turning counter-cultural movements into consumers and producers for ‘mainstream’ culture and industry.

²⁸English is Mariusz's second language.

²⁹ Whilst powerlifters are not generally known for wanting to “lean up”, the process of ‘cutting’ fat following a cycle in which one ‘bulks’ can still be useful for performance purposes (especially for one competing in lighter weight classes, such as Rich). This explains why there is some overlap of powerlifters utilizing drugs that are generally regarded as principally image-oriented in function (e.g. Jim’s comment, cited in chapter three, that in the run-up to summer he will stock more “*anadrol, winstrol, maybe trenbolone*” for “*gym-rat types*” who want to look ‘shredded’ for the beach).

³⁰ Rich suggests he knows of powerlifters who began using AAS at 16, who began training at 12 or 13 (‘Rich’, interview). Previous research into college-aged sporting youths affirms use has occurred in this age range for some time for sporting purposes (Williams 1993; Waddington 2000).

³¹ Clenbuterol is not in fact technically a “steroid”, though is an illicit PIED.

³² It seems plausible Simon was advised to remove these sugary drinks from his diet for health or training purposes unrelated to some theoretical polypharmic effect when taken with PIEDs, and that he simply misunderstood the advice he was being given. Removing excessive sugar from one’s diet has long been practiced by bodybuilders (Fussel 1991; Monaghan 2001; Hotten 2004), so it is probable such advice has diffused to more commercial gym spaces.

³³ *Westside Barbell* is a set of powerlifting routines designed for experienced lifters that caters to PIEDs users. see LouieSimmons.com

³⁴It is interesting to note that this was a significant concern for the individual in question regarding PIED use, and perhaps could be related back to the concept of image-based users operating in a very ‘masculine’ space, building their bodies to appear and feel more ‘manly’, something hypogonadism, or the feared ‘shrunken dick’ could harm significantly. This can be related to the feminist theories discussed in chapter one.

³⁵ See discussion in chapter two regarding the nature of understanding and interpreting “realities” as an ethnographer.

³⁶ Although as noted, one of Pete’s hedonically-using friends was also “*ex-forces*”, suggesting rigid military discipline alone is not enough to instil a cautious approach to use.

³⁷ Since Simon was quoted earlier as informing a friend he should not use AAS for more than 20 weeks at a time, it can be presumed Simon’s statement here in fact refers to being able to run a 20-week cycle at a lower cost (with each vial bought lasting longer), as opposed to literally using for a longer period.

³⁸ In the incident on 11.08.2015, I spoke to an individual in a gym changing room whose friend had begun cycling PIEDs after only recently having had chemotherapy treatment for cancer. The individual with whom I spoke quite reasonably thought his friend should not be using drugs that can potentially increase cancer risks having only recently survived

cancer, but informed me his friend was not listening to his advice, which was causing him some frustration.

³⁹ Former Mr Olympia Dorian Yates notes that copies of his supposed ‘cycle’ posted online are in fact fabrications, and states he never used as much as these allege (Yates in Rogan 2017*iii*). Yates suggests his total use was around a gram (1000mg) of AAS per week, which as shall be addressed this chapter, is an amount now being used by regular gym members. Since Yates freely admits to using AAS, it seems likely he is telling the truth when listing the quantities he utilized in his prime.

⁴⁰If dosed correctly the figure would be 7000mg per week to Rich’s 800mg, which would translate to 4375mg to 500mg per week if Rich’s estimates of the purity of ‘underground’ product are correct. This means an hedonic user, following the protocol described by Big Steve, would be using 8.75 times the amount of testosterone utilized by Rich per week.

⁴¹ Given Mariusz stated he ordinarily used 500mg of testosterone per week, it is probable he used a brand that was 250mg/ml (since testosterone vials are most commonly sold in doses of either 250 or 400mg/ml; see Llewellyn and Tober 2010), suggesting he halved his levels when using tren.

⁴²Brackets are changing listed quantities in mg to an explanation of what these mean in the context of the compound. E.g. 200-400mg test is changed to [low] test, whereas 500-700mg test is changed to [moderate] test. Meaning unchanged from original.

⁴³ Although not discussed in interview, it is assumed the reason Jim followed this advanced ‘stacking’ protocol and Rich did not, despite Rich being advised in his use by Jim, is that Jim’s ‘low test, high tren’ stack occurred at some point following Rich’s tren cycle, with Jim presumably discovering this concept only after he had sold the trenbolone (and given advice on its use) to Rich.

⁴⁴Parameters: Search term “low test high tren”, date range 1st Jan 2008 - 31st Dec 2011, sorted by relevance. 4 pages of results (N=33) returned. Of relevant results, earliest is dated 2nd July 2010, and is available here: <http://forums.steroid.com/anabolic-steroids-questions-answers/436687-low-test-dose-tren-high-test-dose-tren.html> (Retrieved 30/08/2016). No other relevant results were returned with dates earlier than 2011.

⁴⁵ Whilst boldenone has repair properties, and might therefore seem suitable for a user in Rose’s position, there are very few steroids which do not have masculinising effects in females (see Monaghan 2001), and so she avoided all PIEDs except HGH, and ‘anavar’.

⁴⁶ This combination of excessive dosing, yet following a protocol of ‘cycling’, would seem *a priori* to be especially likely in instances where an individual is supplied by a personal trainer for a “12 week challenge” (‘Josh’, interview), since the training period of a predetermined 12 weeks means constant AAS use throughout this time (ordinarily in the run-up to summer) would be akin to undertaking a 12 week ‘cycle’. With ‘12 week challenges’ an increasingly popular phenomenon (a Google search for the phrase “12 week challenge” on 30.07.2017 returned some 744,000 results), this might explain the observations of Big Steve and others regarding hedonically-using young men in commercial-gym environments, where as noted many individuals receive advice from personal trainers (chapter five).

⁴⁷ See earlier discussion regarding the necessity of using testosterone as the ‘base’ to an ‘androgenic’ cycle.

⁴⁸During the period in which Jim was competing, his weightclass was 140+kg. For an account of the health effects of competing at such weight whilst on AAS, see Bell (2014).

⁴⁹ A Google search of the term ‘steroids “blast and cruise” protocol’ returns some 13,200 results (conducted 17.10.2016).

⁵⁰ It is interesting here to note that no respondents expressed concern for HIV or similar IDU-associated viral risks, which were some of the primary drivers behind the formation of NSP policies. Whether this is linked to PIED users generally inhabiting a different social class to other IDUs (see for example Rose’s use of the pejorative “smack head”), or because it is simply so easy to access clean needles in the internet age, is unknown. However, it is clear that HIV was not considered a realistic risk by respondents, a perception that was likely correct based on these social factors.

⁵¹ Following the drug’s creation, methyltrienolone (referred to as “oral tren” by Mariusz) was indeed described in journals as “at present... the most ‘hepatotoxic’ steroid”, suggesting Mariusz is not employing hyperbole in his analysis (see Kruskemper and Noell 1966).

⁵² Although this number included “fat burners” and was not a summary of their oral steroid use only (‘Pete’, interview).

⁵³This does not account for the potential the trainer could have been aware that Josh's supply was heavily under-dosed, as Josh suggests is common in the local area (an assertion supported by Coomber *et al.*'s (2015*i*) research findings). However, if true this would only raise further concerns regarding the trainer's willingness to recommend the use of drugs he knew were not of pharmaceutical quality. Either way, there is a clear knowledge gap, and the potential for harm exists in both scenarios.

⁵⁴Eddie, as noted in the previous chapter, was an image-focussed trainer who followed powerlifting routines, and received advice on PIEDs from a trained medical professional. He therefore can be considered to overlap with the powerlifting community in terms of ethnopharmacological information, despite primarily being an 'image-oriented' user.

⁵⁵Josh's suggestion that he used milk thistle for the kidneys, when it is generally utilized by AAS users to aid in liver function (hepatotoxicity being the greatest risk factor in oral PIED use), would seem to support this assertion (see Llewellyn 2011).

⁵⁶This normalisation of supply of products associated with PIED use can be compared to the sale of recreational drug paraphernalia and imagery with little attempt to disguise its purpose, and to the position of drugs as cultural (and market) commodities described by Blackman (2004), such as the giving away of a free packet of designer 'Rizlas' with a cannabis-associated band's LP (p.89).

⁵⁷Mariusz continued to use cannabis, however, and his motivations for so doing are explored next chapter.

⁵⁸As Measham *et al.* (2001) identify in relation to "going-out" cultures, despite "new cultural acceptance combined with longer transitions to full citizenship and 'responsibility'", users could nonetheless be expected to settle down beyond the age of 30 (p.17), a pattern that likely holds true for PIED-using members of such populations.

⁵⁹The phenomenon of 'underground labs' putting the term 'pharma' in their name to falsely indicate a pharmaceutical-grade product is documented by Llewellyn and Tober (2010). Rich was aware prior to use of the 'GB Pharma' product that it was not in fact pharmaceutical-grade, but many users are not, as Josh noted in interview discussing his own realisation of this fact.

⁶⁰This also might explain why Coomber *et al.* (2015*i*) found that so many products contained less than the label suggested – as a means of decreasing the quantity of alcohol needed to suspend the product, thus preventing such mishaps. Interestingly, it was Coomber (2006*i*) who identified the phenomenon of perceived harmful practices in drug 'alteration' in fact being carried out to enhance user experience for heroin, where he noted that 'cutting' the product with caffeine in fact improved the high, rather than diluted it, as had been the previous assumption (p.90). It seems plausible, therefore, that apparent 'underdosing' of AAS could be a deliberate attempt to similarly improve user experience.

⁶¹My response at this point was "*another?*", amazed Pete knew three people with heart conditions who were all either using, or had intended to use AAS.

⁶²Stavros holds a bachelor's degree in mathematics.

⁶³For many young men in rural Devon, the military is seen as one of the few options for a decent career, so this concern over medical records is likely over-represented in my sample.

⁶⁴Interestingly, Pope *et al.* (2000*ii*) speculate that the percentage of participants affected might have been higher had they not excluded individuals with prior histories of mental illness from their study, owing to ethical and methodological considerations (Pope *et al.* 2000*ii*; cf. Pope and Katz 1994), which if true would further evidence the legitimacy of the 'amplifier' theory.

⁶⁵For further discussion of the role of psychological effects versus physiological, see Bjorkqvist *et al.* 1994

⁶⁶a Google search on 24.07.2016 revealed 948 unique hits for the term "tren rage". Searching the term without quotation marks returned approximately 419,000 results of pages containing both "tren" and "rage" respectively (e.g. "Trenbolone, the only steroid that truly causes 'roid rage'" (AnabolicMinds.com 2006)).

⁶⁷This also offers an alternative explanation for why Simon felt less aggressive 'on' AAS than 'off', cited earlier: taking AAS caused him to abstain from alcohol, and his aggressiveness decreased as a direct result of this abstinence.

⁶⁸ Only 13.4 percent of Bates and McVeigh's (2016) respondents identified sport-oriented goals such as becoming stronger or faster, or improving endurance, as their primary aim in use, compared with 62 percent who wished to 'gain muscle', for reasons other than the primary purpose of increasing strength, and a further nine percent whose primary goal was to lose fat (p.4), evidencing this claim.

⁶⁹ Approximately 80% of Bates and McVeigh's (2016) respondents were under the age of 30, suggesting discrepancies in patterns of recreational drug use do not arise simply from the population being more likely to have 'settled down' (Measham et al. 2001).

⁷⁰ As of 23.03.2017.

⁷¹ Such a study might also ask about the use of melatonin, another sleep-enhancing drug likely to be used in these communities (Evans-Brown et al. 2012).