

# **Beyond Rationality**

## **Antifoundationalism, and the Logic of Identity in Policy-Making**

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## **Author's Declaration**

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## **Publications arising from this work**

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## Abstract

Within drug policy and social policy scholarship, rationality is privileged as the ideal that should underpin policy-making. However, there is a discrepancy between this rational-centred model and what occurs in practice. Despite tacit acceptance of the epistemological impossibility, many in the drug policy field have postulated on how to achieve ‘rational’ drug policies. This thesis engages with this problem, but seeks to avoid the privileging of rationality as previous accounts have done. It draws upon scholarship from critical social policy and a decolonial discourse theoretical approach to make an argument regarding the centrality of identity in policy-making. This concerns the identities of both subjects and objects in policy-making activities. The theoretical argument is tested through an analysis of cognition enhancers within the UK policy agenda.

A genealogical account is presented, drawing upon data from extensive BNIM-inspired interviews with key policy actors, and documentary analysis. This thesis traces how the changing understandings and relationships over the period of cognition enhancers on the UK policy agenda produced policy logics, and limited the range of recommendations deemed possible. It argues that the identities of policy makers, the imagined citizenship, and the objects governed; all interact in the productive logic of policy. This thesis expands upon the centrality of identity in policy-making from the field of critical social policy, and presents a unique account of the limitations of rationality in drug policy; addressing the assemblage of the relational, discursive, affective, social, and cultural dynamics of policy enactment, which occur in sometimes conscious and sometimes unconscious ways. At its core, *Beyond Rationality* argues for a different form of engagement with the policy-making process; one that deals with the politics of identity, rather than competes over the rational truth.

## Table of Contents

<b>Author’s Declaration .....</b>	<b>ii</b>
Publications arising from this work .....	ii
<b>Acknowledgements.....</b>	<b>iii</b>
<b>Abstract.....</b>	<b>v</b>
<b>Table of Contents .....</b>	<b>vi</b>
<b>List of Abbreviations .....</b>	<b>x</b>
<b>List of Figures.....</b>	<b>xii</b>
<b><i>Introduction .....</i></b>	<b><i>1</i></b>
<b>Introduction.....</b>	<b>2</b>
On a Bus in a Remote Corner of Yorkshire .....	2
Introduction to the Thesis .....	4
Critical Drug Studies.....	8
Rationality, Social Policy, and Identity.....	12
Why Drug Policy and Cognition Enhancers? .....	16
Cognition Enhancers in the UK Policy Context: An Introductory History .....	17
Method .....	23
Structure of Argument.....	26
<b><i>Part I – Identity of Subjects.....</i></b>	<b><i>30</i></b>
<b>1. Rationality in Drug and Social Policy .....</b>	<b>31</b>
Introduction .....	31
§1. Rationalist Policy-Making .....	32
§2. The Privileging of Rationality in Drug Policy .....	37
§2.1 Drug Classification is Arbitrary .....	39
§2.2 Alex Stevens’s Principle of Generic Consistency.....	42
§2.3 The <i>International Journal of Drug Policy</i> .....	45
§2.4 Exceptions .....	45
§2.5 Concluding on ‘The Privileging of Rationality’ .....	49
Summary .....	51
<b>2. Critical Social Policy and Identity .....</b>	<b>52</b>
Introduction .....	52

§1. Identity of the Imagined Citizenship.....	53
§2. Identity of Policy-Makers .....	56
§3. Psychosocial Subjects and Interviewing .....	61
§3.1 Narrative Interviewing and Elite Subjects .....	65
§3.2 Recruiting and Engaging with Elite Subjects.....	69
Summary .....	71

***Part II – Identity of Objects..... 73***

**3. Discourse and the Overdetermination of Cognition Enhancers..... 74**

Introduction .....	74
§1. Critical and Effective Histories .....	75
§1.1 Problematising History and the Present .....	75
§1.2 Discourse.....	81
§1.3 Origins, Invention, Emergence, and the Descent.....	83
§2. The Overdetermination of Cognition Enhancers .....	85
§2.1. Internal Determination .....	86
§2.2. External Determination .....	90
Summary .....	93

**4. Identity as Contingency of Objects..... 95**

Introduction .....	95
§1. Contingency .....	96
§1.1 Power and Knowledge .....	96
§1.2 The Archive.....	99
§1.2.1 Producing an Archive.....	102
§2. Identity and Cognition Enhancers.....	105
§2.1 The Debates.....	106
§2.1.1 Medicine, Treatment and Enhancement.....	107
§2.1.2 Equality and Fairness .....	108
§2.1.3 Authenticity and Autonomy.....	110
§2.1.4 Human Nature .....	112
§2.2 To be Human?.....	113
§3. Response to the Identity of Cognition Enhancers .....	116
Summary .....	121

<b><i>Part III – Genealogy of Cognition Enhancers</i></b> .....	<b>124</b>
<b>5. Foresight and Before</b> .....	<b>125</b>
Introduction .....	125
In a Remote Corner of the Universe .....	127
Development .....	131
Hope in a New Dawn: Emotions in Policy and Science .....	136
Future Scenarios.....	140
Ambivalence and Unlikely Futures.....	143
<i>Drugs Futures, 2025?</i> .....	148
Summary .....	150
<b>6. Academy of Medical Sciences</b> .....	<b>153</b>
Introduction .....	153
Political Constraints .....	155
Public Dialogue.....	161
Recurring Tensions .....	167
Beneath the Bellows.....	170
Summary .....	175
<b>7. From 2009 to 2016</b> .....	<b>178</b>
Introduction .....	178
Marginalisation .....	179
Independent Scientific Committee on Drugs .....	183
Learned Society Reviews .....	189
Networks .....	193
Self-Reproducing Discourses.....	193
Interconnectedness .....	196
Emotions as Maintenance of Networks .....	199
DISM and IPED Committees.....	202
Summary .....	204
<b><i>Conclusion</i></b> .....	<b>206</b>
<b>Conclusion</b> .....	<b>207</b>
The Privileging of Rationality in Social Policy .....	207
Identity of Subjects .....	209
Identity of Objects.....	211



Destabilising Cognition Enhancers .....	216
The Genealogy of Cognition Enhancers in the UK Policy Context.....	218
Interaction .....	218
Emotions and the Horizon.....	220
Documents and the Concealment of the Dynamics of ‘Doing Policy’ .....	222
Networks .....	223
- Interconnectedness .....	224
- Repeating discourses .....	225
- Positive emotion as connective tissue .....	226
Concluding Remarks .....	227
<b>Bibliography .....</b>	<b>232</b>

## List of Abbreviations

AAN	American Academy of Neurology
ACMD	Advisory Council on the Misuse of Drugs
ADHD	Attention deficit hyperactivity disorder
AIDS	Acquired immune deficiency syndrome
AMS	Academy of Medical Sciences
ANT	Actor-Network Theory
BMA	British Medical Association
BNIM	Biographical-Narrative Interpretive Method
BSAD	Brain Science, Addiction and Drugs
CEST	Quebec Commission on Ethics, Science, and Technology
CEWG	Cognition Enhancer Working Group
CSA	Chief Scientific Advisor
CSaP	Centre for Science and Policy
CST	Council for Science and Technology
CUGPOP	Cambridge University Government Policy Programme
DISM	Diversion and Illicit Supply of Medicines
DMT	Dimethyltryptamine
EBPM	Evidence-Based Policy Making
fMRI	Functional magnetic resonance imaging
GHB	Gamma-hydroxybutyrate
GHL	Gamma-butyrolactone
HARKing	Hypothesizing After the Results are Known
HED	Human Enhancement Network

HIV	Human immunodeficiency virus
IQ	Intelligence quotient
ISCD	Independent Scientific Committee on Drugs
ISSDP	International Society for the Study of Drug Policy
LSD	Lysergic acid diethylamide
MDAct	Misuse of Drugs Act 1971
MHRA	Medicines and Healthcare products Regulatory Agency
MP	Member of Parliament
NPS	Novel psychoactive substances
PGC	Principle of generic consistency
PIED	Performance and Image Enhancing Drugs
QUANGO	Quasi-autonomous non-governmental organisation
STEM	Science, technology, engineering, and mathematics
STS	Society, Technology, and Society
tDCS	Transcranial direct current stimulation
TDPF	Transform Drug Policy Foundation
TMS	Transcranial magnetic stimulation

## List of Figures

Figure 1 - Drugs: the real deal .....	2
Figure 2 - The scenario matrix (Foresight) .....	143

# Introduction

## Introduction

### On a Bus in a Remote Corner of Yorkshire

I would like to begin this thesis with a personal story, about the event from which other events emerged and which resulted in this thesis. It was a completely unexceptional day, and the event itself was almost completely unremarkable. It serves as the starting point for my own journey, of which this thesis is the culmination, in terms of my intellectual engagement with the interaction of identity, power, and rationality.

My personal realisation that rationality does not hold strong political power has its origin in the mid-2000s. The chance occurrence happened on the 1<sup>st</sup> August, 2006. I was riding the bus back from school, only 15 at the time. As I got up to alight from the bus, I noticed a newspaper lying in the storage area. It was a copy of *The Independent*, the headline read (Figure 1): ‘Drugs: the real deal’, with the subheading: ‘This is the first ranking based upon scientific evidence of harm to both individuals and society. It was devised by government advisers – then ignored by ministers because of its controversial findings’.



Figure 1 - Drugs: the real deal

The rest of the front page was occupied by a large table with the names of 20 drugs ranked in order of harm. The first four all seemed obvious enough: heroin, cocaine, barbiturates, and street methadone – heroin and cocaine being the scariest drugs in my young mind. It was number five that surprised me: alcohol. A drug that I had recently started to enjoy regularly, as so many of my teenage peers had, was the fifth most dangerous? Admittedly, at 15 years old I was legally underage to purchase it,

but alcohol was legal and therefore in my mind ‘safe’. How could alcohol be so high on the list, yet still be legal? LSD, a Class A drug and a drug I thought would send people mad, was down in 14<sup>th</sup> place? Why did harm carry no relation to the classification? I became fascinated by this table. I kept looking at it, over and over again, analysing where drugs stood in relation to one another.

Much of my fascination was due to my having not long previously had a very heated argument with a friend of mine who had started smoking cannabis. Fearful for them, I had tried to persuade them to not use the drug, arguing (ineffectively) that ‘It’s illegal for a reason’. This table awakened a passion for drug policy reform in me, it was so clear that something was wrong here, and the more I investigated and learned, the bigger the problem turned out to be. At university, I got involved with campaigning for drug policy reform. This problem became my main focus and I switched from a mathematics degree to a social sciences degree to pursue it more intellectually.

My thoughts over these earlier years were that people were simply naïve, as I had been before coming across what I thought of as the ‘truth’. I believed that if I could only present people with the evidence, they would come to the same rational conclusions as me and agree that we needed to change our drug laws. As part of my activism, I spoke to and debated with many people with all sorts of backgrounds, and became rather adept at engaging with the usual arguments against drugs. Despite my efforts, and the much more impressive efforts of others in the drug reform movement, it was clear to me that, for a large number of people, there was no changing their minds. On the policy front, there were even fewer positive results, and if anything the policy was continuing to get worse (Seddon, Ralphs & Williams, 2008; Seddon, Williams & Ralphs, 2010; Shiner, 2013). The problem, I came to realise, was that no matter how much evidence you placed in front of people, irrespective of ‘the facts’, or how many people were saying it, it was not enough for change.

That policy was not rational, and that evidence appeared to have very limited impact (if any) on policy formation in this area, contrasted sharply with mainstream accounts of social policy and the Evidence-Based Policy Making (EBPM) I was being introduced to in my academic studies. Fortunately, during my academic training, I was introduced to a number of theoretical positions through which I have come to an understanding of why rationalist accounts of policy-making do not appear to be the

case in practice. I came to learn of psychosocial-informed conceptualisations of social policy, and of discourse theory and its implications for ideas and objects. These points are discussed in more detail in the chapters that follow, but they have come to radically reshape the way we conceptualise almost every object and subject involved in the policy-making process.

The apparent mundanity of this story, yet the emotional impact on me and the relative ‘power’ it has had on my life up to now, speak to the many concerns of this project. This project is very much my attempt to answer the question that this event raised for me. Its transformative impact on my life attests to my focus on identity, and the emotional aspect of it runs through my analysis situated within my psychosocial-informed approach. The fact it was such a mundane event – I am sure I have picked up a great number of newspapers on public transport in my time, and no others have made a significant imprint in my memory – speaks to the concern over history which this project has drawn out. This discarded newspaper on a bus, in so many small ways, represents a microcosm of this thesis itself.

## **Introduction to the Thesis**

This thesis makes an original contribution through an engagement with various actors, networks, relations, and enactments, and an understanding of subjects and objects as being continually ‘made’ through dynamics, which are concealed through processes of cohering. Towards this contribution, my contention is that identity, not rationality, is the organising principle of social policy. Drawing on critical social policy scholarship and a decolonial discourse theoretical approach, it argues that the centrality of identity in policy-making should be extended to include the identity of objects in the policy-making process. I do this by developing the theorisation of identity in critical social policy and decolonial discourse theory, and synthesising them. What both bodies of scholarship demonstrate is the primacy of the political (Laclau & Mouffe, 2014 [2001]) over the rational. This conceptualisation challenges the mainstream theorising of policy-making, because it rejects a privileging of rationality that is inherent in mainstream models. The model developed in this thesis argues that the identities of imagined citizens, policy actors and objects, all interact in the enactment of policy-making process, and their assemblage is determinate of the logic of policy.



I will first make this argument theoretically. Drawing out the centrality of identity over subjects and object, the implications of identity as a non-fixed property are identified and the resultant methodological implications are worked through. Insights from critical social policy scholars (Williams, 1995 [1989]; Taylor, 1996; 1998; Thompson & Hoggett, 1996; Hunter, 2003; 2008; 2009; 2012; 2015; Dobson, 2015) are brought together with those from decolonial discourse theory (Saussure, 1959 [1916]; Wittgenstein, 1965 [1929]; Barthes, 1991 [1957]; Winch, 1964; Skinner, 1969; Foucault, 1980 [1971]; 2002 [1969]; Rorty, 1982 [1981]; Laclau & Mouffe 2014 [2001]; Laclau, 2006; *à la* Said, 1980 [1978]; Hall 1986; 1992; Sayyid, 2003) in ways that radically reconceptualise the social policy endeavour. Secondly, I make the argument empirically through the use of a case study of the emergence and subsequent disappearance of cognition enhancers (commonly known as ‘study drugs’) from the UK social policy agenda. This case study is unique within UK drug policy. Cognition enhancers were a new substance and were responded to in ways unlike any previous substance. Yet the case study is unexceptional in that the processes involved in terms of the interrelation of identity were just as they would be for any other substance.

This antifoundationalist study of social policy has been informed by a number of contributions in the field of social policy and elsewhere, which I shall discuss briefly here. Their influence can be seen throughout the work, but most clearly in the substantive analysis of the presented genealogical case study. The first is that of John Clarke et al’s *Making Policy Move* (2015), whose work troubles the singular and linear way that policy is conventionally viewed. They demonstrate how as policy moves from one location to another, it is translated into its new context. In each new context, there are ‘contested understandings that are mobilised in different ways’ (p. 11). This brings into focus the requirement of policymakers to *enact* policies through their actions of moving and translating policy, with policy itself coming to be understood as an assemblage of these various dynamics. This thesis follows in this direction by drawing out how the policy movements surrounding cognition enhancers involved persistent reformulation of the identities of different subjects/objects (imagined citizens, policy makers, cognition enhancers and other drugs) in sometimes conscious, sometimes unconscious ways.

This understanding of the policy-making process as an assemblage is complemented by the work of John Law and Vicky Singleton (2014) who draw out the heterogeneous

nature of policy enactment. Their analysis of the 2001 British foot-and-mouth outbreak, demonstrates the multiple forms that the disease takes through the diverse activities of various parties. The disease is the symptoms visible on the body of an animal; the pigment that results in a laboratory test; a traceable condition across a population – each the product of different actions, and each subject to their own ‘social’ conditions (i.e. more samples than can actually be tested). Important here, is not that these are different *perspectives* of what the disease is, but that each one is a discrete instance which at times are incompatibly different to another but also can support the existence of the others. These different realities of foot-and-mouth disease in turn resulted in different policy enactments.

If policy is to be understood as something which is an assemblage of heterogeneous, multiple, enactments – it raises the question of how policy takes on a coherence which enables us act as if it is singular. This brings me to the work of Shona Hunter (2008), and their notion of idea of ‘living documents’. For Hunter, documents and documentary practices bring together and order diverse elements. Furthermore to this, policy documents are produced by, but are also productive of, social relations. To this end, the notion of ‘living documents’ encourages us to not look for the hidden meanings and truth that lay behind documents, but rather to turn attention to the way documents are made and used. And this is the empirical focus of this work, here I work towards unpacking the often ‘black boxed’ heterogeneous assemblage of policy documents, and the space this opens up for thinking of the potential destructive/constructive agency and resistance in their production.

For Hunter, the emotions play a central part in this cohering. The centralising of emotions draws on Sara Ahmed’s (2004) work which demonstrates how the circulation of emotions are constitutive in politics. Ahmed’s work has particularly focused on how the emotions are a resource that works through racialized bodies and sentiments to be productive of political positions. Ahmed proposes the concept of ‘affective economy’ (2004); as objects, signs, and bodies moves, they carry with them emotions, and the more they circulate the more the object, sign, or body becomes ‘stuck’ to that emotion. In their critical-race informed perspective, Ahmed draws out how this affective economy is the ground in which the Black body can become ‘stuck’ to an emotion of fear. What is particularly relevant to me, in the analysis of policy, is the way the emotions work between subjects and objects. How this connecting

between multiple beings gives them a force or power, which is structured by and is structuring of the hierarchical values that are placed upon people in conscious and unconscious ways.

In the context of this set of works, the thesis provides an original contribution to knowledge through an engagement with various actors, networks, relations, enactments, and an understanding of cognition enhancers as subjects/objects, all of which are continually ‘made’ through dynamics that are concealed through processes of making coherent. This thesis involves an absolute rejection of the mainstream epistemological assumptions that underpin some mainstream strands of drug and social policy. It is firmly an anti-foundationalist interrogation of policy-making. It rejects the self-evidence to be found within a fixed, ‘out-there’ reality, and the foundational logic of rationality. At the centre of the body of literature above is raised the question of ontology; what makes something what it *is*? It is because of this that I focus upon the notion of identity within this thesis.

The notion of identity employed in this work is radically different to that held within Western metaphysics (c.f. Burkitt, 1991: 1). Here I do not take identity as defined by some kernel within, standing alone and indifferent to the world; some Cartesian dualism of mind and body as the answer to who we *are* (Rose & Abi-Rached, 2013: 1–8). Rather than being a positive residency, I hold that identity is relational and negative; what something *is* only makes sense in relation to what it is not (Laclau & Mouffe 2014 [2001]). This applies to people, but also objects, as drawn out across Parts I and II of this thesis. But I have also been interested in the identity of *things*, that which does not have a physical presence (living or inert) but which exists all the same. How do things like policy which have no body so to speak, come to have such a coherence that they can have such profound impact upon people’s lives? Because identity is not a given but made, it is the marker of a hegemonic sedimentation, an outcome of political contestation – and it is how these play out in practice which of concern in this thesis.

Implicit within this, drawing upon my critical social policy and decolonial influences, is an understanding of normalcy and the ‘normal’ identity being embedded within cultural associations of Whiteness. Whiteness is not simple a somatic property, but ‘a set of normative cultural practices’ (Frankenberg, 1993: 228) and an orientation

towards engaging with the world. The idea of Whiteness employed in this work is constitutive not just of people (as in who does the actions), but also institutionally (as to be seen in what is made possible and acceptable within institutions), and more radically to include objects (as covered in chapter 4 with an analysis of cognition enhancers). It is difficult to identify Whiteness, it is not something that makes itself known through statement of itself, ‘Whiteness is indescribable in its generality, its apparent everythingness; the dominant standard of *humanity*’ (Hunter, 2015: 11; emphasis in original). Within this framing, identity takes on a variety of overlapping considerations.

By advocating for identity to become a central orientation in the analysis of social policy, I am arguing that policy-making is a fundamentally political activity. I therefore hope to increase the forums for contestation in the policy process, thereby broadening the possibilities for democratic interventions. By theorising policy-making in this way that unpacks the often ‘black boxed’ of ‘doing policy’ we can see where – and to some extent how – we can do it differently. The account of policy making as constituted and enacted through the assemblage of various and variegated subjects and objects that is advanced here is expansive. In this work I contend identity is central to policy-making, and if identity is open to active reformulation. By developing an alternative literacy of policy-making which centralises these relational, discursive, affective, social and cultural dynamics, this thesis multiplies the sites of contestation over identity giving us a means for expanding agency and resistance in policy-making.

## **Critical Drug Studies**

To address this issue of how to account for the weakness of rationality and evidence in drug policy, I contend that what is required is a *critical* approach to drug policy – one that moves away from the assumed self-evidence of drugs and associated policy, treatment, production, services, knowledge, or any other element of the assemblage of ‘drugs’. The concerns I have raised here are not only my own. Whilst this work takes aim at drug policy, and is particularly critical of scholarship in this area that has been very active in pushing for rationality in drug policy (see Chapter 1), there are a number of drug policy scholars who have been developing new theoretical approaches to the study of drugs in the wider sense. Although, as we shall see, my approach

diverges from these scholars in subtle but significant ways and should be seen as complementary.

The term ‘critical drug studies’ is relatively new. Although it covers work from a number of scholars dating back roughly over the past decade, it is only recently that the term has been gaining traction in the literature (e.g. Moore & Measham, 2012; Malins, 2017). Critical drug studies emanate from a number of scholars based in Australia who are using insights from actor-network-theory (ANT), and science, technology, and society (STS) scholars such as Latour & Woolgar (1979), Barad (2003; 2007), Mol, (2005 [1999]), Mol & Law (2006 [2002]), Latour (2007 [2005]), Law (2008 [2004]) and Law & Singleton (2014) *inter alios*, with poststructuralist analysis informed particularly by the work of Carol Bacchi (c.f. 2009; 2017; Bacchi & Goodwin, 2016). These scholars argue that drugs and their associated assemblages do not pre-exist the engagement with them, but rather are made, brought into being, and formed through certain multiple instances that render the object within the world (Lancaster, Duke & Ritter, 2015).

An important text within critical drug studies is Suzanne Fraser and David Moore’s ‘The Drug Effect’ (2011). In their introduction, Fraser and Moore highlight two specific problems with recent approaches to drug policy that have called for evidence-based policy: (1) ‘its circularity’ in that it promotes neoliberal ideals of rationality and independence, the very things drug users are stigmatised for not having; and (2) ‘its epistemological naiveté’ in that it assumes that ‘it tends to take for granted that value-free, objective knowledge about the world *can* be produced’ (ibid: 2, emphasis in original). They direct their attention to the latter problem, noting how constructivist critiques of such an objectivist position have argued that problems do not exist objectively, ‘but are constructed by discourse, practice and politics’ (ibid). In other words, drugs are made to be problems in the ways that they are socially *constructed* as a problem.

However, Fraser and Moore take issue with constructivist approaches. Not so much for being wrong, but for perhaps going too far:

‘Are social constructionist views going too far in emphasising the role of discourse in the production of reality? Do theoretically elegant ideas about reality as socially constituted fail in the face of biological ‘facts’? Who would want to dismiss, for example, a fatal heroin overdose as merely a discursive construction, as if a change in ways

of talking and thinking about it would alter it or instantly prevent it from happening?’ (Fraser & Moore, 2011: 4)

To counter this apparent over-reach, they call (pp.4-6) on the work of Karen Barad to consider the role of the material in the production of reality whilst trying to avoid the natural and deterministic assumptions inherent in objectivist approaches that constructivists dismiss. Barad explores light, a thing which, depending on its experimental conditions, displays characteristics of being either a wave or a particle, arguing that light, rather than being only one or the other as would be the case from an objectivist position, is actually *both* a particle and a wave, and what it is occurs as a result of the process of *observation*. What something *is* then, is the result of the ‘intra-action’ of things; the observer and the observed.

Barad’s account provides agency to material as opposed to being passive, and waiting to be inscribed by ‘the social’. Fraser and Moore advance the category of the material-discursive. Although they do not use the term in the chapter itself – it is used by those who take up their insights (e.g. Lancaster, Seear & Treloar, 2015). The material-discursive provides a basis on which discourse and the material are able to co-exist without giving over to (fixed) determinism or (a free-floating) relativism.

Fraser and Moore’s critique, however, relies on an implication that constructivist accounts are focused on the linguistic and do not consider the material or concrete. But is this really the case? This critique of discourse is a common one, with it being accused of a ‘relativistic nihilism’ (Seale, 1999: 469). Is this accusation from an undertheorised understanding of the category of discourse – both by those who critique it and those who use it. Laclau and Mouffe (2014 [2001]: 94-96) respond to some of the more common counters to the category of discourse. Of particular relevance here is that they object to the assertion that discourse is merely *mental* in character, as Fraser and Moore assert, with accusing constructivists of inferring we simply need to change how we talk or think:

‘Against this we will affirm the *material* character of every discursive structure. To argue the opposite is to accept the very classical dichotomy between an objective field constituted outside of any discursive intervention, and a discourse consisting of the pure expression of thought. This is, precisely, the dichotomy which several currents of contemporary thought have tried to break. The theory of speech acts has, for example, underlined their performative character. Language games, in Wittgenstein, include within an indissoluble totality both language and the actions

interconnected with it: ‘A is building with building-stones: there are blocks, pillars, slabs, and beams. B has to pass the stones, in the order in which A needs them. For this purpose, they use a language consisting of the words ‘block’, ‘pillar’, ‘slab’, ‘beam’. A calls them out; B brings the stone which he has learnt to bring at such and such a call’.<sup>1</sup> The conclusion is inevitable: ‘I shall also call the whole, consisting of language and the actions into which it is woven, the ‘language game’’.<sup>2</sup> It is evident that the very material properties of objects are part of what Wittgenstein calls language game, which is an example of discourse. What constitutes a differential position and therefore a relational identity with certain linguistic elements, is not the idea of building-stone or slab, but the building-stone or the slab as such. (The connection with the idea of ‘building-stone’ has not, as far as we know, been sufficient to construct any building.) The linguistic and non-linguistic elements are not merely juxtaposed, but constitute a differential and structured system of positions – that is, a discourse. The differential positions include, therefore, a dispersion of very diverse material elements’ (Laclau & Mouffe, 2014 [2001]: 94-95; emphasis in original).

The category of material-discursive is a solution to a problem that does not necessarily exist. It occurs by only appreciating what I argue in Chapter 3 is the first implication of discourse; the rejection of pre-evidence. According to Laclau and Mouffe in the quotation above, the discursive is material and by leaving discourse without appreciating its material character, the centrality of identity fails to emerge. This does not mean that Fraser and Moore’s suggestions, and especially not their work, are therefore invalid or unproductive. Far from it; they are part of the much-needed multiplicity of theorising that disrupts hegemonic drug policy, which is necessary for doing it differently. The category of discourse necessitates a reflection on identity as, if discourse is productive of reality but is not free-floating (as argued in Chapter 4), it is productive of and alters the identity of objects with which it is concerned. In this thesis it is my hope to more fully realise the potential of theorising out discourse, and synthesising it with insights from other critical policy scholars.

In December 2017, a conjoined special issue of the journal *Contemporary Drug Problems* and *Social History of Alcohol and Drugs* was published. The editorial accompanying it was entitled ‘Gender and Critical Drug Studies: An Introduction and

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<sup>1</sup> Wittgenstein, I. (1983) *Philosophical Investigations*. Oxford. p. 3.

<sup>2</sup> *Ibid*, p.5.

an Invitation' (Campbell & Herzberg, 2017). The editors articulated what they deemed as a lack of gendered analysis of drugs in drug policy and invited their readers to consider the production and reproduction of gender and drugs. Inevitably, their focus on gender brings up the intersectionality of gender analysis. Whilst they do not state identity, their introduction highlights the assemblage of identity with the formation of drugs. I am most grateful to Nancy Campbell and David Herzberg's intervention to the field, and accept their invitation to carry out a critical drug study where class, race, gender and other normative formations of power (which I will refer to as hierarchical categories of identity) are centred.

A critical drug study that centralises concerns of race, class, gender and other normative structures in the analysis of drug policy is a necessary means of avoiding the rationalism impulse of policy analysis. Historical antecedents, often discursively concealed (c.f. Hesse, 1997: 87), are thus vital in understanding how drugs and hierarchical normative categories are intertwined with one another in their mutually reinforcing co-emergence. The privileging of rationality within the field of drug policy occurs principally because this historical co-emergence is ignored, and it is ignored specifically because drugs are assumed (or at least analysis is allowed to continue to the effect of an assumption) to have self-evident properties.

Critical drug scholars have been critical of the assumed self-evidence of drugs (in its wider terms of reference). Campbell and Herzberg have announced their invitation for gendered – and, by extension, intersectional – analysis within critical drug studies. This work is an acceptance of this invitation, but rather than approaching this study with an ANT or STS orientation with (Bacchi-informed) poststructuralism, I do so with a synthesis of critical social policy scholarship and a decolonial discourse theoretical approach. There is much overlap between these two positions, the scholarship within critical social policy that I utilise in this this draws on insights from ANT and STS; and (Bacchi-informed) poststructuralism shares much of the same lineage as decolonial discourse theoretical approach. This thesis differs from the majority of critical drug studies, however, in its centring of identity.

### **Rationality, Social Policy, and Identity**

The problematic of rationality being privileged as a solution to flawed policy despite demonstrable evidence of its failure to bring about positive change is not specific to



the field of drug policy, although here it is particularly egregious in this regard. It has its roots in the historical underpinnings of the philosophy of social policy. Social policy has had as a modernising impulse and a belief in progress informed by reason, a belief that has its foundation in the philosophy of the Enlightenment (Sanderson, 2002). At the turn of the 20<sup>th</sup> century, socialist movements had successfully campaigned for policy to have a principle of collectivism (Williams, 1995 [1989]: 4). These tenants of reason and progress, as assumed foundations of policy (and of society and of ‘man’) found their way into the models of the policy-making endeavour. Social Policy scholars thus advocated for social policy with a principle of universalism, insofar as it was thought to promote integration and social harmony (Williams, 1995 [1989]: 9).

However, with the major expansion of social policies and their failures in the US in the 1960s and the New Social Movement critiques at the same time in the UK, it became ever more apparent that policy did not work as intended, resulting in a reconsideration of rationality (Fischer, 2003: 5-11). Unfortunately, this reconsideration did not result in a rejection of rationality, but saw only its reformation under notions of ‘bounded rationality’ (c.f. Simon, 1967 [1957]), ‘implementation gap’ (Dickinson, 2011), improving ‘knowledge utilisation’ (Leeuw, 1991; Estabrooks et al., 2006) and the like, that kept rationality as the ideal that was hoped it would be, and which finds its current form in evidence-based policy-making (EBPM). These approaches demonstrate the persistence of a perception of social policy as a technocratic endeavour and the belief in empiricism (Fischer, 2003; Williams, 1995 [1989]).

Fiona Williams’ *Social Policy: A Critical Introduction* (1995 [1989]) is highly critical of the empiricism within certain tendencies with mainstream social policy scholarship because it asserts a universalism of the welfare subject. In other words, mainstream accounts assert ‘a general universalism that favours the impartial determination of the recipients of welfare and the impartial allocation of benefits to them’ (Thompson & Hoggett, 1996: 22). Universalism, although a laudable ideal for social policy, was actually very rarely a principle informing social policy. Williams laments how raced and gendered analysis of the welfare state had been ignored in social policy scholarship. Her historical analysis of the development of British social policy eschews concern for the solely economic in favour of an analysis which presents the

intersections of class, race, and gender. In particular, it accounts for how ‘unquestioned assumptions about the family and nationalist chauvinism’ (Williams, 1995: 6) were embedded into the formation of policy provision.

Rather than rationality and universalism, Williams argues that the ‘organising principles of welfare in the UK have been ideas of *Work, Family, and Nation*’ (pp.xiii-xiv; italics in original). The implementation of policy, sometimes explicitly whilst at others implicitly, had an inherent understanding of *who* it considered as its subjects, and policy was designed for their production (and reproduction); the single male-breadwinner and the female care-giver, with their whiteness a given. For Williams (1995 [1989]: 149), ‘the welfare state [i]s part of a racially structured and patriarchal capitalism’, and people experienced the welfare state from this position within this categorical hierarchy. Williams’ analysis highlights how social policy is structured around the desired identity of the imagined citizenship, providing the second element of social policy formation where identity plays an organising role (discussed further in Chapter 2).

Williams’ insightful analysis has been productive for critical social policy scholars, who have concerned themselves with the aim ‘to develop an understanding of welfare from socialist, feminist, anti-racist and radical perspectives’ (SAGE, c2014). Since Williams’ critique in the late 1980s, there has been an active group of scholars who have adopted psychosocial, critical-race and critical-feminist informed analysis to theorise notions of human agency and power and, significantly for this work, social identity to radically rethink the welfare state (Dobson, 2015: 687). They have come to understand social policy as an assemblage and enactment (Clarke et al., 2015: 9).

This thesis also draws from Shona Hunter and her development of theorising governance from a feminist psychosocial perspective (2003; 2008; 2009; 2012; 2015). Inherent within this conceptualisation of the welfare state, is a reappraisal of policy-makers. Hunter’s (2003) concept of the ‘relational identity’ is employed to account for the fact that policy-makers occupy multiple social positions, both ontological and categorical identities<sup>3</sup>; they are policy ‘providers’ but also policy ‘recipients’. This multiplicity comes to disrupt monolithic conceptualisations of policy actors as

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<sup>3</sup> Ontological identity can be understood as singular identity, whilst categorical identity can be understood as a collective identity (i.e. man/woman), see Taylor (1998).

singularly located. Critical social policy scholars have developed analyses which have been attentive to the role of the multiple identities that policy-makers embody and how these play out through material, symbolic, and affective dynamics. This lineage of scholarship has prompted a conceptualisation of social policy where the identity of the welfare subject and the policy actor interact and get ‘lived out’ in practice in ways where the role of evidence and rationality (in its traditional sense) are not given determining priority (Hunter, 2012). This is the final element of policy formation where identity plays a determining role, something discussed further in Chapter 2.

This lineage of critical social policy scholarship has had an uneasy relationship with discourse as developed by Foucault, which informs my engagement with the identity of objects. Foucault’s emphatic disdain for psychology and psychoanalysis rubs up against the intellectual heritage of those taking a psychosocial informed approach. It is one of my core concerns in this thesis to bring together this psychosocial-informed critical social policy with the category of discourse to demonstrate and further theorise the centrality of identity in social policy enactment. This is because identity – whether of the imagined citizenship, of policy actors, or of objects – is always a political sedimentation (Laclau & Mouffe, 2014 [2001]). Identity is therefore open to contestation, and the more sites open to contestation the more possibilities there are for democratic intervention by providing a greater understanding of the spaces in which agency and resistance are more able to influence policy.

My interrogation of this problem of evidence and its weakness in making change in turn concerns itself with a critique of rationality more broadly. Rationality cannot be sustained under the implications of identity. It requires an external, perhaps eternal, truth by which the validity of a statement can be measured against its ‘correspondence with reality’ (Rorty, 1982 [1981]). Identity denies this possibility (Laclau & Mouffe, 2014 [2001]). What I hope to offer in this thesis is a theorising of the state and policy-making that eschews essentialism by focusing on the centrality of identity which is *always* multiple and contingent. Decolonial discourse theory posits the significance of the identity of objects (Part II), whilst critical social policy scholarship has advanced the role of identity of the imagined citizenship and of policy actors (Part I). Both these approaches are brought together in this thesis.

## Why Drug Policy and Cognition Enhancers?

Whilst a chance event on a bus may be very pleasant, it does not in itself justify a thesis. Although I have chosen drug policy to expand on the theorising of the centrality of identity in social policy, I have no reason to think that these dynamics are specific to drug policy alone. However, there are a number of reasons why I believe drug policy and cognition enhancers are particularly apt for exploring the relationship of identity to policy-making. At its base, my theoretical argument is that *identity not rationality is the determinant logic of social policy*. Here, I will justify why I have chosen the case study of cognition enhancers in UK policy-making.

Firstly, I selected drug policy because it works as a case for the failure of the dominant mode of theorising – that of rational, technocratic governance. Drug policy is an area where rational argument has so clearly been ineffectual in policy discussions yet continues to be held as the solution and an ideal to be achieved. The drug policy field thus plainly presents a strong example of the problem with which this thesis is in conversation.

Secondly, drugs are themselves considered antithetical to rationality. This thesis is concerned with the question of rationality and its limits, so it is fitting that drugs be the object of choice because the prohibition of drugs has its roots in the fear of the enslavement of the population and the risk to rational society (Seddon, 2010): ‘many scholars have argued that the existence of addiction as an idea and a problem is co-extensive with that of Enlightenment notions of reason and rationality’ (Fraser & Moore, 2011: 7). That drug policy would be for the protection of rationality is ironic given that drug policy itself is the subject of sustained critique for its very irrationality.

Thirdly, identity is often given a peripheral importance in drug policy scholarship. In their invitation to *Gender and Critical Drug Studies*, Campbell and Herzberg (2017) highlight that a large body of scholarship has looked at the intersections of race and drugs (e.g. Musto; 1991; 1999; Lusanne, 1991; Manderson, 1999; Mauer, 1999; Alexander, 2010; Thompson, 2010; Murch, 2015). However, as they note, the majority of this comes from critical race scholars whose primary interest is ‘carceral studies and those exploring social deprivation’ (Campbell & Hersberg, 2017: 252). More often than not, where race is addressed in drug policy scholarship, it is concerned with the differences between groups rather than the mutual coming into

being of drugs and race, and how some drugs become raced and policies are in effect designed to target those populations (see Provine, 2007; c.f. Blackman, 2004; Stevens 2011a). Race features in research on drug markets, law enforcement and prevention, but it is not a central concern (Murji, 2000 [1999]: 51) despite its central influence in drug policy's origins (Helmer, 1975).

Finally, I select cognition enhancers as my case study because they present a unique case and object within UK drug policy. When cognition enhancers emerged as an object of interest to UK policy-makers, their conceptualisation challenged predominant modes of governing drugs, and they continue to be conceptualised in such ways. The language of *Drugs Futures, 2025?* – the first published report of the case study of cognition enhancers in UK policy-making, they were considered a 'new breed of drugs' (Foresight, 2005b: 3). Cognition enhancers were neither recreational nor medicinal. This 'new'-ness is most valuable for this study as it attests to the fact that what these substances are or were had not yet become settled, and were therefore still open to contestation over their *identity*. That cognition enhancers were explicitly understood as a 'third category' of drugs is striking because it represented a categorically new object within the field of drug policy-making, something which had not occurred before.

Significantly, cognition enhancers were a new object which was seen in some way to demand alternative policy responses than those usually employed for medical or recreational substances. This thesis is an analysis of how the identity of cognition enhancers, their relationship to identities of the policy actors and the identities of the imagined citizenship structured the policy responses. Through the empirical case study presented in this thesis, I demonstrate how the changing identity of cognition enhancers over the period that it was on the UK policy agenda altered, and how these different identities interacted with the various identities of the imagined citizenship and policy actors.

### **Cognition Enhancers in the UK Policy Context: An Introductory History**

At this point I would like to provide a history of cognition enhancers in the UK policy context, as can be read from publicly available documents. In the UK, cognition enhancers first entered the policy discussions which resulted in the report *Drugs*

*Futures, 2025?*<sup>4</sup> (Government Office for Science, 2005). The report was the output of the *Brain Science, Addiction and Drugs* project, a part of the Government's Foresight programme within the Office for Science and Technology.

'Foresight's aim is to produce challenging visions of the future to ensure effective strategies now. It does this by producing a core of excellence in science-based futures expertise, and access to leaders in government, science and business. ...An important output of Foresight is to bring together different experts from different disciplines so facilitating new collaborative insights and enduring research groupings' (Nutt, 2005: 325).

The *Brain Science, Addiction and Drugs* project was started in 2002. As part of the project, a formal stakeholder group, which was chaired by the Minister for the Department of Health, Lord Warner, with representatives from the Home Office, police, Medical Research Council, Wellcome Trust, and the Nuffield Council on Bioethics, amongst others (Nutt, 2005). 'From this, several novel issues relating to addiction emerged such as what will be the place of cognition enhancers (modafinil and sequelae) in 2025' (Nutt, 2005: 325).

Cognition enhancers interested the *Brain Science, Addiction and Drugs* project because they posed a novelty in respect to drug policy, they were something that had not been addressed before. In the executive summary of *Drugs Futures 2025?*, it was suggested that developments within neuroscience, genetics, pharmacology, psychology, and social policy meant that over the 20 years following the report there would be new understandings of:

'mental processes, bringing with it the potential for substances that can enhance the performance of our brain in specific ways, such as improving short-term memory and increasing our speed of thought. This *new breed of drugs* is called cognition enhancers.' (Foresight, 2005a: 3; emphasis added).

The reason for being considered a 'new breed' is because they purportedly did something different to what other drugs did. In the Foresight report, drugs were classified into three groups: recreational; medicines; and cognition enhancers. These are referred to as 'recreational', 'medical', and 'enhancement' drugs throughout this thesis.

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<sup>4</sup> The 'report' is actually 6 separate documents available from the Government Office for Science, 2005; with 15 associated state-of-science background reports.

As part of the project, ‘horizon scanning’ was undertaken, with potential future scenarios being articulated. Scenarios, according to Nutt (2005: 325; emphasis added), are: ‘*a process of growing sophistication and robustness that allows a range of different futures to be estimated and explored in the context of current knowledge and possible future technologies*’. These were outlined in the report *Drug Futures 2025?: The Scenarios* (Foresight, 2005c). Of the scenarios presented, one was referred to as ‘high performance’, a potential future where the use of drugs for cognitive improvement was predicted to be common place within the workforce, characterised by a culture of ‘neuro cosmetics’ (Foresight, 2005c: 7; 2005a: 8). Written from the perspective of August 2025:

‘The UK is a strong global player in goods, services and (particularly) talent. Many commentators attribute the UK’s current prosperity to the constant churn of ‘knowledge nomads’ – the newly emerged class of elite knowledge workers who roam the globe constantly in search of new challenges and interests and who regard the UK as one of the most progressive societies in which to live and work. The UK remains confident in a world where trade and production are increasingly concentrated in a small number of large multinationals, but it is also aware that its continued success depends on remaining attractive to nomads’ (Foresight, 2005c: 11).

This scenario is accompanied with a nine-page history with bizarrely specific historical events, including a ‘landslide victory in the 2015 election’, and a ‘King’s speech’ in 2021. For the authors of the report, the use of cognition enhancers is situated in a world where rational arguments inform policy, and society’s views of drug use have become progressive. For the authors of these reports, rational policy is derived specifically from the use of science and from it being ‘evidenced based’. This perspective implicitly orientates towards ontological and epistemological notions of a fixed, determinable reality. Here we see the conflation of progress, reason, science and so on, inherent in the principles of the Enlightenment (Hamilton, 1995 [1992]). Cognition enhancers at least in the scenarios, were linked to a progressive society.

In 2006, the Academy of Medical Sciences (AMS) was asked by the UK government to conduct an independent review of the *Drugs Futures 2025?* report (AMS, 2013c). As part of the review, there was a public consultation called ‘*drugsfutures*’ which remains the most in-depth survey of the British public’s attitude towards cognition enhancers. The *drugsfutures* consultation was particularly interesting in regards to the

frame of reference for its research. It noted three classes of drugs that it would consult the public on: ‘recreational drugs’; ‘medicines for mental health’; and ‘Cognition enhancers’ (AMS, 2008: 1). This public engagement survey is indicative of the public’s receptiveness to understanding cognition enhancers as distinct from medical and recreational drugs. Furthermore, the findings of the public dialogue also indicate the public’s belief that cognition enhancers should be dealt with differently to either medical or recreational drugs currently, focusing more on arguments of the natural and unnatural with respect to cognition enhancers (p.59), but on stigma for medicines for mental health, and around harm for recreational drugs (p.45).

The final report was to make three recommendations: 1) improve research on short- and long-term effects and efficacy of using cognition enhancers; 2) the production of new regulations with a suggestion of provision of use in non-medical contexts with ability to revise evidence for harmful drugs be placed within the purview of the ACMD; and 3) that ‘localised’ regulation could emerge to cover issues about use within schools, universities, and the workplace (AMS, 2008: 159-160).

In the same period, the British Medical Association (BMA) produced its own working paper on cognition enhancers, *Boosting your Brainpower: Ethical Aspects of Cognitive Enhancements* (BMA, 2007). The discussion paper was intended to encourage debate among doctors and other medical professionals and with the public. It sought to start the ethical discussions *before* cognition enhancement (through drug use and other methods) became commonly requested (p.2). Similar reports and advice were provided by the American Academy of Neurology (AAN, 2009), and the Quebec Commission on Ethics, Science, and Technology (CEST, 2009). Whilst the scope and focus varied among these three professional bodies, they all tried to address what they foresaw as to be an upcoming ethical dilemma for the medical profession of how to respond to requests for cognition enhancers from patients who did not need them for medical reasons.

In mid-March 2009, the New Labour Home Secretary, Jacqui Smith, sent a letter to David Nutt in his role as the Chair of the Advisory Council on the Misuse of Drugs (ACMD). Smith requested that the ACMD provide advice on four areas, one of which was on cognition enhancers;

‘Following the findings of the Foresight projects, the Academy of Medical Sciences (AMS) Report *Brain Science, addiction and drugs*



made a number of recommendations around this class of psychoactive substances. The AMS identified a role, together with others, for the ACMD in increasing our understanding of the harms of these drugs, including possible developmental issues, psychological dependence or addiction. The AMS also raised the issue how best we regulate cognition enhancers. I would like the ACMD to take an active part in these considerations and advise the Government accordingly, especially as to how we keep pace with this rapidly evolving field' (Smith, 2009)

Here, the Home Secretary clearly refers to cognition enhancers as a distinct 'class of psychoactive substances'.

Later that month Nutt (2009a) replied, stating a working group would be convened to advise the government. According to a written response by the Home Office, the Cognition Enhancer Working Group (CEWG) met twice on 8<sup>th</sup> August and 8<sup>th</sup> October 2009 (*Hansard*, 2010), however according to the ACMD annual report for 2009-2010, it convened only on 8<sup>th</sup> October (ACMD, 2010: 7). At this meeting, the CEWG agreed to focus on the three most common cognition enhancers, Adderall, Ritalin, and Modafinil, the first two already being controlled under the Misuse of Drugs Act 1971. The annual report also noted that the chair of the CEWG resigned in November 2009 (p.8).

The resignation of the chair of the CEWG, C. Ian Ragan, was a result of the new Home Secretary – Alan Johnson had replaced Jacqui Smith – asking for the resignation of David Nutt as Chair of the ACMD. Ragan quit the ACMD over the political interference in the ACMD (Ragan, 2009) and joined David Nutt in the newly formed Independent Scientific Committee on Drugs (ISCD: [www.drugscience.co.uk](http://www.drugscience.co.uk)) and continued his research (Ragan, Bard & Singh, 2013). The CEWG is not mentioned in the following year's annual report (ACMD, 2011), and there is no (at least, publicly available) annual report after this date. At the time of the start of this research project, the priorities of the ACMD were the 'recovery' agenda, and novel psychoactive substances (NPS) (ACMD, n.d.). From the publicly available documents alone, the ACMD's CEWG appears to have stopped, as there is no evidence as to it ever having appointed a new chair, nor having met after 8<sup>th</sup> October 2009.

In recounting the thinking that circulated during this period, David Nutt was to state:

'I would say that is another stepping stone in human evolution where rather than random selection of genes we now have some targeted medication to improve mental functions. I wouldn't have a problem.

We discussed this in the UK governments Foresight report of seven years ago now. The issue was then more one of equity, do the rich have it and the poor not, or do you give it to everyone in order to enhance the quality of a population or a country? We were actually seriously interested in whether these might be strategies that could be used by other countries which perhaps value achievement more than some countries in the West and that would put the West at an economic disadvantage. So there are very interesting political and moral issues of equity about this. But in principle I think if we were able to achieve that kinds of drug we should full endorse it and fully encourage its use' (in Hyman, Volkow & Nutt, 2013: 9)

Here we get glimpses of the underlying logic of the interest in cognition enhancers; the questions they raise, the hopes of what they might deliver us, and the fears that they might give others. It indicates how the conceptualisation of objects and the imagined citizenship play into logics of policy.

This was apparently the end of the UK government's interest in cognition enhancers. What had started in 2002 as an investigation into the future of drug and brain science finished with as much fanfare as it began: none. However, towards the end of 2015, an amendment to the Psychoactive Substances Bill was proposed by the Conservative MP Cheryl Gillan, which would have once again asserted the distinction of enhancement drugs from medical and recreational drugs in UK policy.<sup>5</sup> The bill was intended to counter-act a problem where NPSs ('legal highs') were being produced more rapidly than the current regulations of the 1971 Misuse of Drugs Act could respond. It effectively prohibits in advance any new psychoactive substance regardless of its effect or potential harm. The definition of 'psychoactive substance' is extremely broad as 'capable of producing a psychoactive effect in a person who consumes it' (Psychoactive Substances Bill 2015-2016: 2). This definition is excessively broad and applicable to almost anything someone consumes, and hence the exemptions of food and medicine, but also of alcohol, tobacco and caffeine. The proposed amendment sought to extend this list to include 14 cognition enhancers (House of Commons, 2015). The amendment was rejected in the House of Commons in January 2016. They also very briefly entered the remit of the ACMD again with the DISM report, although this was little more than a few minor references and a

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<sup>5</sup> Cheryl Gillan MP is recorded as saying she made the amendment after one of her constituents who sells cognition enhancers online requested she make an intervention (<https://www.newscientist.com/article/2074813-youre-not-hallucinating-mps-really-did-pass-crazy-bad-drug-law/> - accessed 22<sup>nd</sup> Jan 2016).

recommendation to add cognition enhancers to a watch list (ACMD, 2016). And here cognition enhancers once again vacated the policy sphere.

This introductory history draws together what was publicly available concerning to cognition enhancers in UK social policy as of mid-2016 at the time this project began, with the addition of the final inclusion of the DISM report. From a rationalist perspective of social policy, the fact that cognition enhancers disappeared without much of substance to show for all the effort expended on them could be explained as it being deemed that nothing needed to be done. However the genealogy that is presented in this thesis demonstrates a much more complicated series of events. Identity is central to this genealogy: the identity of cognition enhancers fluctuated and was often in tension over their potential and their concrete effects; the identities, motives and perspectives of the experts involved; and the question of the identity of the British public and its place in the world. The public history of cognition enhancers appears rather ‘flat’, but beneath this, and with refocusing, it demonstrates the political terrain of social policy and the centrality of identity in these political enactments.

## **Method**

To demonstrate the theoretical framework I wish to advance through this thesis, I draw on original empirical research of an example of policy-making within the national UK policy-making apparatus – that of cognition enhancers. Many of the methodological issues are addressed throughout the theoretically focused chapters, however, a short overview is given here.

A genealogical study was conducted, tracing the events through which cognition enhancers came to be on the UK policy agenda. Whilst the publicly available history would suggest this would be between 2003 and 2009, over the period of this research this timeframe was expanded to cover 2001 through to late 2016. This was because whilst the documents available at the beginning of this research project finished around 2009 with the ACMD report, as the interviews were being conducted it became apparent that the policy discussions had continued outside of the traditional policy apparatus, and resulted in the reintroduction of cognition enhancers (if only slightly) in social policy discussions between 2015 and 2017.

Documentary analysis was used to compile an archive consisting of: the publicly available documents discussed above; other published documents from learned societies when their activities became included in the case study; minutes made available by a Freedom of Information request to the Foresight project; press releases; Hansard; newspaper articles; journal articles; a governmental 1-year project review; emails; circulated drafts; briefing documents; and event papers. Documents were continually added to the archive as analysis was conducted, inclusion occurred because either documents made reference to other documents, or because they were indicated as relevant or made available through interviews.

The documentary evidence was complemented by interviews with key actors from various stages of the case study. The interviews were conducted between late-2016 and mid-2017. Potential research participants were identified by being named on the collected documents. Further individuals were identified as the evidence collection was conducted and their importance was identified. Potential participants were primarily academics, civil servants, science writers, and social researchers employed to conduct public engagement activities.<sup>6</sup> Most interviews were conducted in person, however three were conducted over the phone, one via Skype, with one being done via email exchange. Some interviews were not conducted in person at the request of the interviewee. A total of 12 people were interviewed, with permission to use a personal email exchange with a further individual, which preceded the project.

Because of the psychosocial approach to this research project, a Biographical-Narrative Interpretive Method (BNIM) informed the interview technique (Wengraf, 2001; 2015; Hollway & Jefferson, 2013). As Mason (2002: 38) notes, there is a difficulty in trying to apply technical procedures that have often developed from abstract reasoning directly to qualitative research methods. This was apparent with the rigid BNIM interviewing technique clearly not being workable in this context. It is clear that ‘psychosocial methods are interpretive; they involve the search for underlying meanings and the translation and organization of what is being researched’ (Woodward, 2015: 50), and so the analysis in this thesis are therefore *my* interpretations of the interviews and data collected during this project. These

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<sup>6</sup> Whilst I appreciate it may be useful to provide more specific participant information – such as gender, ethnicity, age, institutional position – to do so would increase the likelihood of inductive disclosure beyond a level promised to participants when signing the consent form.

interpretations (and the data collection itself) have been orientated around questions of identity, rationality, and object relations, and therefore are productive of a particular sort of result.

Interviews lasted between 1 hour 25 at the longest, and 25 minutes at the shortest, the average being 1 hour. Interview guides were individually tailored to ask questions about the interviewees' specific historical involvement, whilst 'pushing for narratives' (Wengraf, 2001) and maintaining space for 'free association' to allow participants to provide data that they themselves deem of importance (Hollway & Jefferson, 2004). The interviews were recorded and transcribed, and the transcriptions were formatted for ease of analysis. Notes were also made by hand during the interviews, and a field diary was kept. The written notes were consulted during the analysis. Documentary analysis (including of the interview transcripts) was conducted using NVivo software. A combination of historical construction, thematic analysis, and discourse analysis resulted in a genealogical account. Quotations within the thesis have been cleaned up for clarity where this has not affected meaning or analysis.

Historical analysis was done using Aeon Timeline software. Discourse analysis is not formulaic. Thematic analysis was an ongoing process that ran constantly from the start of the project. Early themes emerged from a combination of my theoretical framework and knowledge of the literature, with more emerging over time as the analysis continued (Williams et al., 1990; Miles & Huberman, 1994, both cited in Ryan & Bernard, 2000: 781).

Whilst 'Anonymity is one of the core principles of research ethics and is usually regarded as the mechanism through which privacy and confidentiality are maintained.' (Vainio, 2012: 685), it was not something that could be guaranteed in this project, as 'inductive disclosure' was a significant possibility given the small population from which the potential participants would be drawn and their names being on documents. With quotes that have been used, participants' positions have been used; for example, 'Foresight project member', or 'Academy Working Group member'. In the analysis presented in Chapter 6, it was deemed impossible to sufficiently anonymise, and therefore this analysis has been redacted from public versions of this thesis, and will be embargoed until the relevant parties have retired

(to which they have consented). The project received ethical approval from the University of Leeds (AREA 15-150).

## **Structure of Argument**

To construct my argument regarding the centrality of identity in policy-making, this thesis is split into three main parts. The first two are theoretical in nature, with the latter being the empirical case study demonstrating the relationship between the first two areas. Part I deals with the issue of identity in social policy, Part II the issue of identity of objects, and Part III covers the empirical case study, mapping the genealogy of cognition enhancers on the UK policy agenda.

Chapter 1, 'Rationality in Drug and Social Policy' outlines the specific ways that I take rationality as being given an overly-central role within the fields of drug policy and social policy. It begins by focusing on rationality in social policy, starting from the 1960s onwards when there was an expansion of welfare activities in the UK and the US aimed at tackling poverty. I discuss how rational-technocratic models of social policy became hard to maintain in light of policy failure, and suggest that rather than these models being discarded as a result of these failures (and evidence of their negative outcomes when achieved), social policy scholars have simply worked to reconstitute rationality as the underlying principle of social policy. The chapter then turns to drug policy scholarship to trace how the field (in the UK) similarly adopts this centrality of rationality by arguing that the failure of drug policy is because of its lack of rationality. In this, rationality gains a privileged status within mainstream drug policy scholarship as the solution to the failure of drug policy. This is peculiar because there is very often a tacit acceptance that policy *cannot* be rational, yet it continues to maintain its privileged status.

In Chapter 2, 'Critical Social Policy and Identity', I introduce how critical social policy scholars have used ideas of relationality and identity to rethink the policy-making apparatus as ways that challenge the conceptualisations inherent to those outlined in Chapter 1. This brings out the centrality of identity in policy-making in terms of the identities of the imagined citizenship (*à la* Williams), and of policy actors (*à la* Hunter). It is here that the importance of *psychosocial subjects* emerges. Understanding individuals as both *psycho* and *social* has been used by critical social policy scholars to rethink social policy, but it also has major implications for the

conduct of interviews. The latter part of Chapter 2 deals with the methodological consideration of interviewing for this project.

Chapters 3 and 4 tackle the question of identity and objects, and outline the decolonial discourse theoretical approach that this takes. Chapter 3, 'Discourse and the Overdetermination of Cognition Enhancers', focuses on the most widely understood tenant of discourse theory, that there is no fixed reality 'out there'. This requires an appreciation of the historicity of ideas and objects, and so Chapter 3 begins with a discussion of critical and effective histories. This involves methodological discussions relevant to the conduct of a genealogical analysis, specifically around notions of traditional history that need to be rejected and replaced with a new set; most importantly, invention and emergence. To demonstrate the lack of fixed-determinations to objects, I turn to an analysis of cognition enhancers. Looking at scientific laboratory studies and research with university students, I argue that what cognition enhancers are cannot be determined by reference to fixed determinants either internally or externally to the substances themselves. Cognition enhancers are *overdetermined*.

Chapter 4, 'Identity as Contingency of Objects', turns to the other side of the category of discourse, the side that I identified Fraser and Moore as ignoring previously, that of contingency. If discourse was to only infer that objects are overdetermined, there would be no reason why we would not be free to say *anything*. This is demonstrably not the case, the language we use has meaning that is understood by those who share membership in the linguistic community. Discourse, in other words, is a system of shared meanings. Without being part of this system, the terms we use would be meaningless. This raises the importance of the archive to analyse the rules of formation of the discourse. The methodological implications are then considered; in particular, how the archive was developed for this case study, the rules of inclusion and exclusion, and how to appreciate the meaning and understanding of policy documents. The work of scholars from critical social policy with their focus upon identity and policy actors, and the linking of power and knowledge within discourse theory demonstrate the primacy of the political over the primacy of the rational in policy-making.

Having considered the methodological implication of the archive and outlined how they are handled within this this research project, Chapter 4 turns to demonstrating the contingency of cognition enhancers in the academic literature, tracing the major philosophical and bio-ethical debates surrounding cognition enhancers. These new substances attract substantial consideration of their implications around the borders between medicine, treatment, and enhancement; how they could be used to the benefit or detriment of equality and fairness within society; raise concerns over our authenticity of self and autonomy of choice; and if by actively choosing to ‘enhance’, whether we are playing with human nature. What I contend, however, is that all of these philosophical and bio-ethical debates are underpinned by the assumption that these drugs do not repair a disorder but rather enhance an already ‘healthy’ subject to an idealised subject, a construct underpinned by conceptions of a ‘normal’ subject that is white, heteromasculine, able-bodied, etc. This presumption exists in the hinterlands that constitute these drugs as ‘cognition enhancers’. I argue that this specificity of cognition enhancers results – in the academic literature – in very different policy debates.

Having outlined the centrality of identity of imagined citizens, of policy actors, and of objects, I turn to demonstrating their interaction in Chapters 5 to 7. These chapters constitute the genealogical account of cognition enhancers in the UK policy arena, and each chapter matches to a stage of the genealogy. Chapter 5 covers the emergence of cognition enhancers onto the UK policy agenda, and the discourse of the Foresight project. It is in this stage that the clearest examples of the interaction between the identities of the imagined citizenship and of objects can be traced. This period also demonstrates the way that emotions vary according to the distance to the horizon that policy endeavours are tasked to consider. At this stage, with the furthest look into the future, it is the most filled with hope and cognition enhancers embodying that hope.

Chapter 6 considers the Academy of Medical Sciences’ review of the Foresight project. At this stage, the identification of cognition enhancers comes up against the imagined citizens and policy-makers of this period. At the same time potential futures became foreclosed, demonstrating the impact of wider hinterlands on discourse. It is also here that, by tracing the emotion of disappointment, it becomes clear how documents work to conceal the relational, discursive, affective, social, and cultural dynamics of policy-making. Chapter 7 turns to post-2009, when the cognition



enhancer issue was transferred to the Advisory Council for the Misuse of Drugs and its Cognition Enhancer Working Group, and the policy activities that occurred after that, up until late 2016. It is with these activities that the vitality of cognition enhancers in this period can be understood in relation to the network which surrounded the policy-making apparatus. The Conclusion then turns to a consideration of the theoretical, methodological, and empirical contributions of the thesis, considering how I contribute to the multiplication of the sites of contestation for policy engagement.

## **Part I – Identity of Subjects**

# 1. Rationality in Drug and Social Policy

## Introduction

Rationality holds a privileged position in Western society. It corresponds to reason, one of the principles of the Enlightenment project (Hamilton, 1995 [1992]: 35). Despite constructivist and post-structuralist critiques, it has remained quite resilient and has maintained its status as a characteristic of 'Western' society and 'Man'. It is from this that grew the Whig interpretation of history, with the assumption that forward-looking individuals (such as William Beveridge 'the man with the plan', see Blakemore, 1999 [1998]: 51) and developments have brought about improvements in society. From this perspective, 'developments in social policy are viewed as elements of progress on a path from intellectual darkness to enlightenment' (Fraser, 2003: xxv-xxvi). It is therefore unsurprising that rationality is a central tendency within mainstream social policy scholarship.

In this chapter, I outline what I perceive to be the dominant mode of theorising social policy, to which social policy and identity are situated in contrast. I sketch how rationality maintains a privileged status in the fields of social policy and drug policy. In Chapters 2 to 4, I focus more on the epistemological limits of rationality, but I here outline how it has maintained its centrality in both fields despite concrete demonstrations of its failure and tacit acceptance of its limits. This is done by demonstrating that rational models of policy-making fail to achieve their policy aims, and where rational technocratic governance has been achieved, it has not resulted in social good. Whilst these failures of rationality are actively taken up by mainstream social policy scholars, what is significant is how alternative models are produced that maintain the centrality of rationality as a principle and an ideal that should be pursued.

In section 1 I take an historical orientation to the field of social policy, and the role of rationality as a principle that was demonstrably working, and the failure to produce social good even when policy was implemented in rational-technocratic form. Section 2 focuses on the drug policy field, outlining how the argument against it is structured through an analysis that positions it as irrational and situates the solution as rationality itself. This provides the background by which critical social policy scholarship (discussed in the next chapter) and critical drug studies (discussed previously) can be understood as a response.

## **§1. Rationalist Policy-Making**

In this section I trace an argument that begins with an outline of the logical structure of mainstream social policy analysis, a logic that is directed at the rationality of actors and their actions in social policy-making, these are theories of *government* (i.e. policy is conducted through direct control by the government; Clarke, 2004: 108). This is the backdrop against which social policy and identity advance the argument for the centrality of identity as a determining logic of policy-making, placed largely within theories of *governance* (indirect pursuit via a multitude of agencies; see Clarke, 2004: 107-111). Here, I am primarily concerned with tracing how rationality holds a central status within mainstream accounts of social policy, understood as being a rational-technocratic endeavour. Importantly to this account is how when it became realised that the intention of policy-makers alone was insufficient for achieving policy goals, new models were proposed which retained the dominate logic of rationality as the natural and ideal principle of social policy.

The discipline of social policy ‘came of age’ in the 1950s (Blakemore, 1999 [1998]: 8), but it was in the 1960s that it expanded rapidly as a result of the Great Society legislation of US President Lyndon Johnson and his ‘War on Poverty’, with formal reporting incorporated into new legislation. However, it became apparent that the policies aimed at alleviating poverty, into which vast amounts of money had been invested, had failed to meet the goals they set out to achieve (Fischer, 2003: 6-7). This resulted in what Frank Fischer (2003) terms an empiricist turn, and with it an assumption that the solution to policy failure was achievable by gathering the correct information and providing it to decision-makers in a form that was most usable to them. The problem I wish to identify however, is that despite ever increasing attempts at improving the knowledge production system, there continues to be a failure of policy in achieving its praise-worthy aims.

Dickinson (2011) outlines how the failure of policy to achieve its stated aims came to be understood in top-down and bottom-up interpretations of the state and social policy. The distance between intention and achievement is referred to as the ‘implementation gap’, also known as the ‘implementation deficit’, and the 1970s and 1980s saw an emergence of theories which focused on ‘implementation’ and tried to account for this disparity between policy aims and achievements. Top-down theories

understood policy as a formulation of ends and means by central planners to then be implemented. Top-down approaches suggest that policy-makers fail to have their policies fully enacted by the providers of policy who *should* deliver policy as outlined by policy-makers. The failure of policies were thus due to incomplete formulations, or the failure of policy-makers to take full account of all the important conditions (Dickinson, 2011: 72-74).

Top-down models contrast bottom-up approaches which stressed the knowledge of service professionals in their specific circumstances and restraints. Bottom-up theories neglect this, highlighting that policy is never complete and it is the responsibility of policy practitioners and service providers to interpret policy. The failure of policy is thus the result of policy practitioners who do not deliver policy as intended (Dickinson, 2011: 74-75). These theories maintained a strong positivist intuition (Fisher, 2003). They are highly rationalist, and the failure of policy is placed within a failure of producing rational policy conditions conducive to the proper implementation of a given policy. In both top-down and bottom-up approaches, policy remains a purely rational process, and the failure of policies results from the insufficiently rational actors that embody the policy infrastructure.

‘Vexing social and economic problems are interpreted as issues in need of improvement management and better programme design; their solutions are to be found in the objective collection of data and the application of the technical decision approaches that have in large part defined the policy sciences since the 1960s (Williams, 1998)’ (Fisher, 2003: 4-5).

Empirically, in a study of traffic management planning in the Danish city of Aalborg, Bent Flyvbjerg (1998 [1991]) has been able to demonstrate how the assertion that policy is a purely technical exercise is misplaced. Rather, it is multiply embedded in politics. The Alborg project was an ambitious city planning project, intended to transform the city to improve public transport, increase the safety of cyclists and pedestrians, and reduce noise and traffic pollution, all within an integrated system. Flyvbjerg, through the use of interviews, documentary analysis, and a keen sense of history (a methodology that informs the presented case study in Chapters 5-7), traces the trajectory of the Alborg project, starting off as a city-wide plan that would be implemented over-night, to a project that bore little resemblance to its starting point and which progressed at a rate that its implementation would only ever be partial.

This was not the result, as top-down and bottom-up approaches would suggest, of a failure or incompetence of policy-makers to design a complete policy (the Alborg project was impressive in its completeness), or the scuppering of best-made plans by those tasked with implementation (for those who were, minus the police, did their very best). As Flyvbjerg reveals, the project was manipulated by invested groups, who were able to change the project through various techniques; the end result being what from a ‘rational’ perspective would appear almost grotesque. What happened in Alborg over the course of two decades was repeated inflections of power within the project. The project, as first developed, was a completely rational technocratic plan, with all aspects interconnected so as to achieve its larger ambitions. From its beginnings, however, the project changed as powerful groups were able to define the ‘reality’ of the situation: whether that be that the location of new bus terminal *must* have certain requirements which means it can only be in one of two favoured locations; the number of stops such terminal *needed*; the worth of enforcing traffic offences; or the importance of customers on the high street that come by car.

The Aalborg project demonstrates that, while it is presumed that rationality reigns supreme in informing and directing action in a democracy, it is very often side-lined in favour of *rationalisations* of the powerful who come to define the correct course of action. Power, as Flyvbjerg demonstrates, is the ability to make a decision and then present the rationalisation of that decision as rationality itself (often framed in a way that make the chosen outcome as ‘obvious’). What appears to be a rather mundane, purely technical exercise in the deployment of policy – the development of a bus terminal – is in fact awash with *realpolitik* (real politics). In other words, what we find in the case of the Alborg project is a multiplicity of instances for which the rationalist models of social policy cannot account for. The empirical tendency with some strands of social policy, as described by Fischer, is inadequate for appreciating the ‘realities’ of the situation.

Studies within social policy have long been critical of the possibilities of achieving total rational policy-making processes. The failure of decision-makers to be able to fully plan or accommodate for all relevant factors within the policy-making process, and implementation has come to be explained as a matter of ‘bounded rationality’:

‘The capacity of the human mind for formulating and solving complex problems is very small compared with the size of the problems whose

solution is required for objectively rational behaviour in the real world – or even for a reasonable approximation to such objective rationality’ (Simon, 1967 [1957]: 198).

For someone to be fully rational, they must be able, once presented with options, to ascertain the best option given all the possible outcomes of each. The principle of bounded rationality suggests that the capacity of people to problem-solve, when compared to the complexity of problems, is small. To be able to bridge this gap, decision-makers are thus reduced to having to formulate simplified models of the ‘real world’ (Simon, 1967 [1957]: 198-199). Therefore the responsibility of those who study social policy is to develop knowledge and the means of providing that knowledge in forms that able to provide the best simplified models for policy-makers. The objective here is still for ‘a “technocratic form” of governance’ (Fischer, 2003: 5). Decision-makers have to work with simplified models of the ‘real world’ and act rationally within the system of that simplified model (Simon, 1967 [1957]: 199).

It is therefore the role of the social policy analyst to consider how to correct the faulty scales of the decision-makers, as if policy analysts have secret access to the true means of measurement. The effect of this is to turn the seemingly irrational into a form of rationality and once again return ‘man’ to their rational status: Indeed we are rational, it was only our definition/understanding of ‘rational’ was misplaced, and we have now corrected it and we were always right. This is reminiscent of the practice in scientific paradigms where occurrences of phenomena that run contra to the paradigm are explained away as something to be resolved later, or are simply placed outside that domain of worthy of interest and investigation (Kuhn, 1996 [1962]). Rationality retains its privileged position. Decision-makers, with their simplified models, are considered to be acting rationally, but within the system of that simplified model. The effect of this theoretical move is to turn the non-rational into a form of rationality, and once again return ‘man’ to their status as a rational being. To borrow words for another purpose; ‘It is not the system’s professed aims which are at fault but their imperfect realization. The solution is “more of the same”’ (Cohen, 1989 [1985]: 18). Rationality is still the ideal to be sought, and something that is hoped to be reached and therefore aimed for.

Failing to see partial elements within a system is not in itself the failure of a model. A model can be expanded to include those elements in an increasing drive towards a

simulacrum. The problem is when the foundations of the model are themselves suspect. This centring of rationality within certain strands of social policy scholarship is problematic because it structures what is considered to be relevant problems and suitable answers. Traditionally – and there still remains a major focus within the current social policy literature – social policy has been understood under a paradigm of rationalism (Dickinson, 2011; Fisher, 2003; Clarke, 2004). Paradigms are frameworks for the acceptance of what is in the world, and constitute what can be considered as being worthy of analysis, and how you gather data of that world and conduct such analysis. But paradigms do not only explain what is in the world, they also tell us what is not in the world (Kuhn, 1996 [1962]). When social policy is placed within a rationalist paradigm, it becomes understood only as a technical exercise. In this way, it removes the political, subjective, emotional and other dynamics that are constitutive of the social policy process.

Fischer (2003: 9-10) explains how the rational and technocratic modelling of the policy process came up against its limits in the stark relief of the US administration's handling of the Vietnam War. The policy planning surrounding the Vietnam War was operated under a paradigm of 'rational analysis' – using methods of systems and cost analysis to provide objective strategies. Regardless of the sophisticated analysis, the war was badly managed and poorly calculated, with many viewing the reliance on rational analytical techniques as being largely responsible for the negative outcomes. The models were unable to appreciate critical social and political aspects of the war, and the strategic logic of the expert recommendations failed to see or refused to acknowledge the shifting political landscape of Vietnam.

The very visible failure of the rationality project during the Vietnam War served to undermine the legitimacy of the rationalist paradigm. Many policy scholars reconsidered the epistemological basis for rational decision methods, resulting in a multitude of critiques which Fischer broadly terms 'postempiricism' (Fischer, 2003: 11-16). Postempiricism has argued that the rationalist paradigm assumes a positivity to the world which current epistemology cannot support (Laclau, 1977: 59-60). These critiques align with the constructivist critiques described above. Postempiricism stresses the need for policy analysts to move away from rational technocratic models in favour of taking account of the social and political dynamics of policy, and the world-building inherent in problem construction. The policy analyst has no privileged



position to know the solution, their aim should rather be to advance understanding of how processes work.

Despite postempiricist critiques, many mainstream social policy scholars have only a partial acceptance of this failure of objectivity to produce ends that were positive for society. It is this partial acceptance that motivates the argument of the thesis. For these scholars, there does become an acceptance of non-objective elements, but:

‘most of the mainstream efforts at reform have introduced qualitative methods in ways that still subordinate them to the larger empiricist/rationalist project, more often than not in the hope that one day it will finally rise to the challenge’ (Fischer, 2003: 16).

Within the field of social policy there is a specific strand relevant to drugs policy which is founded in rationalist principles, that of about evidence-based policy-making (EBPM). Within EBPM scholarship, the ‘modernist’ impulse of progress driven by reason is kept alive (Sanderson, 2002). Indicative of this body of scholarship is Raw Pawson (2005) who claims to recognise constructivist critiques of empiricism, but refuses to engage with it in a meaningful way. Their explanation is to prefer a supposedly pragmatic approach focusing on ‘what works’. The effect is to (notionally) accept constructivist critiques, but to continue as was regardless. For a particular strand of ‘mainstream’ social policy like EBPM, rationality still holds its privileged location within policy-making, and is hoped to retake its mantel once the ‘limiting’ aspects can be resolved.

## **§2. The Privileging of Rationality in Drug Policy**

The contestation over the centrality of rationality within Social Policy arose within the context of UK drug policy post-1997. The election of the New Labour government, with its claims that they were going to follow ‘what works’ resulted in much initial hope within the field of social policy (Packwood, 2002: 267), and gave the notion of rationalist policy-making a renewed relevancy within drug policy scholarship. That parts of the field of drug policy would share the same tendencies as strands of the field of social policy should not be surprising given that drug policy is

subsumed under social policy<sup>7</sup>. Drug policy scholars do not engage solely in conversations around drug policy; their conversations are informed by the very same discussions that predominates within social policy literature. Over the last two decades in the British policy context, a characterising concern has been one of evidence, and in relation to this evidence-based policy-making (EBPM) was a political response in the run up to the 1997 general election, it was directed towards what had come to be seen a moralistic policy-making by the Conservatives who had been in power for over two decades. This renewed hope in rationalist policy-making was soon to fade, however, with some cynically claiming that what we ended up with was ‘policy-based evidence’ (Bennett & Holloway, 2010: 416). Questions then turned to why evidence was not being used properly, and how to try and make sure it was.

A principle concern of this is the apparent lack of, or at least misuse of, evidence in drug policy-making. For some, it was a problem of translation: policy analysts’ use of esoteric language, implications of findings not clear for policy solutions, in other words, policy-makers did not know how to use the evidence (Ritter, 2009). To others, it was a matter of policy-makers not providing spaces where evidence could be provided (MacGregor, 2012; MacGregor, Singleton & Trautmann, 2014). For some it was about what evidence was being presented to policy-makers, hierarchies were produced that ranked the supposed weighting of evidence, those of a more ‘scientific’ and quantitative nature being considered more valuable than research of a ‘subjective’ and qualitative nature which is more characteristic of British social policy (Monaghan, 2011). Others developed notions around the idea that evidence was used or rejected depending on whether and to what extent it fitted the beliefs of the moment (Stevens, 2007). Because during this period drug policy was particularly a highly political issue, a lot of the literature around EBPM and drug policy intersects. Indeed, as Kari Lancaster puts it: “‘Evidence-based policy’ has become the catch-cry of the drug policy field’ (2014: 948).

To be clear, I understand the call for evidence as a call for empiricism, with its ‘objectivist’ epistemology and roots in rational, technocratic models of policy-

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<sup>7</sup> This claim ‘that drug policy is subsumed under social policy’ is potentially contentious. It could be argued that it actually a matter of public policy, or criminal justice policy. There is value to these categorisations. However, my primary interest is centred upon the UK. Within this geographical delimitation I think there is a substantial overlap between the fields of social policy and drug policy (see rest of chapter), and therefore elect to consider drug policy a specialist area of social policy.

making. Drug policy analysis is engaging in multiple conversations, which characterise the nature of the questions being asked, problems found, and solutions presented. The conversations about EBPM have aired the concerns around the technical problems of translation, making information available and circulating the trickiness of political influence. These accounts map onto the top-down explanations of the implementation gap, and the ideas of bounded rationality. In each of these cases, we have a situation in which there is a privileging of rationality.

In this section I will trace the relationship between statements that demonstrate the privileging of rationality specifically within the field of drug policy. There are two distinct aims that characterise the selection of these statements for the purpose of demarcating the problematisation of the failure of rationality to produce effective policy responses which this thesis engages with. The first is that they outline the formation of the criticism against drug policy, showing how it is structured through an analysis that positions drug policy as irrational and situates the solution as being rationality itself. The second is the importance of those statements within the field of drug policy, they are statements made by important and influential actors, indicating the centrality of these statements to the field. After outlining this argument, I will then turn to how the limits of rationality are frequently tacitly accepted, yet rationality retains its privileged status, once again returning to a technical consideration and falling into a framework based on rationality.

## **§2.1 Drug Classification is Arbitrary**

One of the main critiques of drug policy is that the distinction between legal and illegal drugs is an arbitrary one (Taylor, Buchanan & Ayres, 2016). By this, it is meant that there is nothing within drugs which determine illegal drugs as ‘illegal’ and distinguishes them from other, ‘legal’, drugs. For the prohibition of some drugs to be justified, there must be criteria for separating one from the other which can be rationally determined. Often, the justification for the separation of legal and illegal is that illegal drugs are harmful, and the implication that legal drugs are not, or less so. As the former Director of the US Drug Enforcement Administration, John Lawn, said in the Statement to the Senate committee investigating drug legalisation; ‘Drugs are not bad because they are illegal, they are illegal because they are bad’ (n.d. cited in Coomber, 2000 [1998]: xi). The critique that drug policy is arbitrary and irrational is

often adopted by drug policy reform activists who seek to challenge the assumed legitimacy for prohibition as protecting against social harm.

In the newspaper I found on the bus, the study on the front page was conducted by David Nutt and colleagues (2007a) and used a nine-category matrix of harm, with an expert Delphic procedure, to assess the harms of a range of drugs, both licit and illicit. Their results found no correlation between harm and the classification of a drug. If there was, Class A drugs would have been more harmful than Class B, which would have been more so than Class C. Yet this was not the case, nor was there any correlation between whether a drug was legal or not. As Nutt and colleagues state in reference to UK drug classifications of A, B, and C: ‘The current classification system has evolved in an unsystematic way from somewhat arbitrary foundations with seemingly little scientific basis’ (2007a: 1047).

The use of a 3-tiered classification system for drugs is predicated on the acceptance that some drugs, such as heroin and cocaine which are Class A, are more harmful and/or dangerous than other drugs, such as GHB/GHL and ketamine which are Class C. The inclusion of a drug within the classification system of the 1971 Misuse of Drugs Act is argued to be that drugs which are harmful are included, whilst drugs which are considered not harmful (or not harmful enough) are excluded. Nutt et al.’s study demonstrated this logic to be inconsistent in practice.

Nutt (2009b) was to take this further with a comparison to horse riding. With a humorous play on words, Nutt called horse riding ‘equasy’ (to mimic that of ecstasy). Nutt describes equasy, in a manner that concealed its actuality, in a rhetoric common to those to describe illicit drugs:

‘what is equasy? It is an addiction that produces the release of adrenaline and endorphins and which is used by many millions of people in the UK including children and young people. The harmful consequences are well established – about 10 people a year die of it and many more suffer permanent neurological damage as had my patient. It has been estimated that there is a serious adverse event every 350 exposures and these are unpredictable, though more likely in experienced users who take more risks with equasy. It is also associated with over 100 road traffic accidents per year – often with deaths. Equasy leads to gatherings of users that often are associated with these groups engaging in violent conduct. Dependence, as defined by the need to continue to use, has been accepted by the courts in divorce settlements. Based on these harms, it seems likely that the ACMD would recommend control under the MDAAct perhaps as a

class A drug given it appears more harmful than ecstasy' (Nutt, 2009b: 4)

Nutt's purpose here was to ask, if the given justification for the prohibition of some drugs was that they were harmful, why were more harmful and dangerous activities such as sports still allowed by the law, even socially encouraged? If the law was rationally consistent, either these activities would be banned, or currently illegal drugs would be legal.

Nutt's critique came to the fore in the Autumn of 2009. As they recall in their 2012 book *Drugs without the Hot Air - Minimizing the Harms of Legal and Illegal Drugs*, the equasy article prompted the then Home Secretary Jacqui Smith to call David Nutt to demand he apologise for making the comparison and for offending the families of those who have suffered loss as a result of horse riding. In a particularly revealing extract from the phone call, as recalled by David Nutt, we find a policy logic at play that propagates drugs policy:

*Jacqui Smith: You can't compare harms from a legal activity with an illegal one.*

[Nutt]: Why not?

*Jacqui Smith: Because one's illegal.*

[Nutt]: Why is it illegal?

*Jacqui Smith: Because it's harmful.*

[Nutt]: Don't we need to compare harms to determine if it should be illegal?

*Jacqui Smith: You can't compare harms from a legal activity with an illegal one.*

(Nutt, 2012: 20-21)

Here we see an inability, in the face of rational argument, to make a comparison between objects that are positioned so differently from one another. The absence of a rational reason for why some drugs are legal whilst others are not is what causes Nutt, among others, to claim that the distinction between legal and illegal is arbitrary.

To state that something is arbitrary is to claim that something is random, the result of personal whim, without reason. However, this type of critique relies on an essentialism of drugs, that there is a fixed, immutable truth of what they are. Essentialist thinking assumes that there is something internal, an essence, to drugs which characterises them as drugs which is absent of external interference. This is

important because by essentialising, the interrogation of drugs focuses on the drugs themselves rather than their history to see how these objects came to be the way they currently are. This discursive concealment of the histories of struggles removes and delegitimises lines of analysis and critique. By a foreclosing of history, we are unable to identify the processes and rationalisations that have created legal distinctions between objects which, under scientific classifications, are of the same kind.

But it is within the context of this erasure produced by the essentialism of drugs that analysis of drug policy can claim that legal and illegal classifications are arbitrary. Through this we can see how rationality takes a privileged location within drug policy analysis. First, the legal classification is attacked for lacking a rational basis for its formation. Second, rather than linking the history of this formation's emergence and suggesting moves to counter it, it is asserted that the lack of rationality itself is the problem and that it should be corrected by the development of a rational basis for the legislation of drugs (Nutt et al., 2007a).

## **§2.2 Alex Stevens's Principle of Generic Consistency**

Alex Stevens picks up the conversation about the need for a rational basis to drug policy, and proposes his own solution for achieving it (Stevens, 2011a; 2011b). The selection of Stevens here is particularly significant. His suggested solution is explicit in its intention to provide a 'rationalist approach' for the regulation of drugs, and thus is a clear example of a tendency to privilege rationality in drug policy analysis. But Stevens is also the president of the International Society for the Study of Drug Policy (ISSDP), which holds a significant position of respect in the field of drug policy, and its contributions are given due attention and consideration.

Taking up the work of moral philosopher Alen Gewirth (1978; 1996), Stevens develops a framework to provide:

'a rationalist, rights-based approach, drawing on the neo-Kantian arguments of Gewirth... its advantages [are] in not relying on personal preference, political tradition, the international balance of power, or legal argument' (Stevens, 2011b: 234).

Here we see how the rationalist approach is held to gain its authority by appeal to foundations of reason, outside the influence of non-truth. Gewirth's argument that Stevens employs is a development of Kant's categorical imperative that one should '[a]ct in such a way that you treat humanity, whether in your own person or in the

person of any other, always at the same time as an end and never merely as a means to an end' (Kant, 1981 [1785]: 36 cited in Stevens, 2011a: 2). Gewirth terms his philosophical position the 'principle of generic consistency' (PGC). According to Stevens<sup>8</sup>, Gewirth's PGC when adapted to a framework for a rational basis to defining social harm, rests on a law of non-contradiction. The law of non-contradiction states that a proposition and its contradiction cannot both be true.

The first principle of Gewirth's argument is that any agent who wishes to act must do so by necessity and value the conditions for action, which he says are freedom and well-being:

'As Gewirth (1982: 47) puts it, "since agents act for purposes they regard as worth pursuing... they must, insofar as they are rational, also regard the necessary conditions of such pursuit as necessary goods"' (2011a: 3).

If an agent does not believe the conditions necessary to act are good, then they cannot believe that their actions are good; it would be contradictory. Ergo, they must value the conditions to act or otherwise suffer the 'pain of self-contradiction' (2011a: 3; 2011b: 234). By extension,

'because a person accords these rights to herself on the grounds of being an agent, then she must also, again on pain of self-contradiction, accord these rights to other persons who have the capacity to act towards purposes' (2011b: 234).

Thus, a person must value their own and other's necessity to the conditions of action, those of freedom and well-being.

Rights can thus be put into a hierarchy for deciding which harms are the most important. 'Rights are of greater priority when they are more needed for the creation or maintenance of the freedom and well-being that are necessary for purposive action' (2011a: 3), distinguishing between three hierarchical levels of rights; basic, non-subtractive, and additive. Basic rights are those which are conditional to being able to have agency, such as life itself. Non-subtractive rights are those which diminish one's

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<sup>8</sup> A detailed reading of Alen Gewirth's philosophy is not presented here, as the focus is on Stevens' use and interpretation. This is particularly relevant because Steven's simplification of Gewirth's argument results in hiatuses between propositions which under interrogation raises questions as to the logical flow of the argument. Stevens makes explicit that the simplification is for the purpose of making it accessible for the lay reader, and therefore the hiatuses should not be considered as necessarily problematic.

ability to act, but do not remove it. Lastly, additive rights are those which increase one's ability to act towards their purposes.

It could be argued from this hierarchy that it would be legitimate to ban the use of drugs because the use of drugs is 'inherently harmful to ability to guide one's conduct rationally' (Stevens, 2011a: 3). This alludes to one of the fundamental fears of illicit drug use; it results in a loss of rationality. The image of the human as a rationally acting agent holds a significant place within Western culture, and because there is a right to be protected from having one's capacity for rational action removed, the use of drugs violates one's basic rights. However, Stevens rejects this argument, responding that drugs are not necessarily harmful to rational action; whilst some people do end up with dependence or cognitive impairment, the vast majority of people who have ever used illicit drugs have not ended up impairing their ability to pursue their rationally chosen actions.

Stevens tells us that the law of non-contradiction is a proposition attached to Aristotle and his laws of thought. And 'although many attempts have been made to disprove this law, *they have all ended in confusion*' (2011a: 2, emphasis added). I cannot comment on the validity of Stevens' evaluation of attempts to disprove Aristotle's law of non-contradiction, but I do take issue with his application of this 'law' to human behaviours and beliefs. The assertion that an agent must value the conditions of action for themselves must surely, under 'pain of self-contradiction', value them for other people is simply not met in the concrete. Stevens here is predicating this argument on the basis of people being rational actors. However, people are not rational, they *are* contradictory. This is one of the central principles of psychosocial approaches. Psychosocial subjects (as discussed in Chapter 2) are both psycho and social, and therefore embody multiple subject positions, which could be in contradiction with one another. In other words, Stevens' rationalist approach to rights of drug use and regulation is based on an assumption of human rationality that does not exist in the uncomplicated form that he presents. This critique is returned to later, but for now we can see how rationality comes to take a central location as the solution to the problem of drug policy.



### §2.3 The *International Journal of Drug Policy*

This section maps the main structure of the argument in which rationality is considered the solution to the problem of drug policy. This privileging of rationality is dominant within the field of drug policy. David Nutt and Alex Stevens are highly respected names in the field, and they assert the necessity for rational drug policy-making, and this assertion is shared by the most influential journal in the field. The *International Journal of Drug Policy* is the 4<sup>th</sup> highest ranked journal under the category of ‘substance abuse’ (Thomson Reuters, 2016).<sup>9</sup> Of the three journals that rank higher, one – *Nicotine and Tobacco Research* – is focused only on a specific substance rather than ‘drugs’ as a broad category, and the other two – *Addiction*, and *Addiction Biology* – whilst certainly having policy relevance, are not necessarily policy-focused. With this in mind I contend that the *International Journal of Drug Policy* is therefore the most influential drug policy specific journal. The editorial decisions of the journal then, have an importance for what is deemed worthy within the field of drug policy.

In 2001, the Journal got two new editors, Gerry Stimson and Tim Rhodes. Stimson and Rhodes used their first editorial to outline their hopes and intentions for the future of the journal under their leadership, the editorial was entitled ‘promoting rational drug policy’ (Stimson & Rhodes, 2001). Apart from their desire to strengthen the journal through increasing the types of paper it would publish, it made a very clear indication of what they hoped the journal would contribute:

‘We hope that with your help — as contributors and readers — the journal will promote *rational* and humane drug policy in a global context’ (Stimson & Rhodes, 2001: 2; emphasis added).

The lack of rationality is seen as the core of the problem, and rationality takes root as the solution required.

### §2.4 Exceptions

So far, my examples have been rather explicit and limited to a small number of writers. The selection of drug policy commentators such as David Nutt, Alex Stevens, Gerry Stimson and Tim Rhodes was made firstly because they so clearly illustrate the

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<sup>9</sup> A search by category, the *International Journal of Drug Policy* places the journal 6<sup>th</sup>; however 2 of the higher-ranked journals occur twice.

argument I am trying to make – that rationality is considered the solution to the drug policy ‘problem’ – but secondly that they also hold significant positions within the community of drug policy scholars. Rhodes and (formerly) Stimson are editors of the *International Journal of Drug Policy*, arguably the most influential drug policy-specific journal. Nutt is one of the best-known drug policy reform advocates, and was chair of the ACMD, gaining much popularity within drug policy circles for his comments ‘from the top’. Stevens is president of the ISSDP, a position which would infer a certain level of respect for their work and opinions. Each of these individuals are leaders within the field of drug policy, and whilst it would be wrong to generalise and claim that the field has a homogenous stance with regard to these ideas, it would be foolish to ignore that one becomes a leader in their field by expressing the ideas or sentiments which the field shares in broad measure.

Of course, as with any field, not everyone subscribes to the same values as those at the top.<sup>10</sup> Furthermore, following the critique of Steven’s General Principle of Consistency, it would be incorrect to assert that even the most ardent proponents of ‘rational’ drug policy are incapable of accepting to some degree the limitations of a purely rational policy framework. Indeed, Stevens does on occasion remind us of the limitations of the purely rationalist thinking of the policy process. However he has a tendency that I here suggest is frequent and somewhat characteristic of those who maintain a privileged position of rationality in drug policy scholarship. The limits of rationality are identified and duly noted, yet it stills maintains its privileged position as something to be desired and achieved. In other words, when rationality comes up against limitations, it is merely modified to resolve the contradictions that it comes up against, and then taken up once again its mantle as an orientating ideal.

These conversations which privilege rationality as the solution to the problems of drug policy have been running parallel and overlapping with conversations around EBPM. There is a majority element within the literature for rationality to similarly hold a privileged place; policy is not acting rationally as it should, this is a problem, and we should develop methods for resolving it. This has involved looking at the evidence itself. Mark Monaghan’s (2011) research into how evidence is used in drug

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<sup>10</sup> Such as the growing body of critical drug scholars primarily based in Australia using ANT and STS theories that are critically engaging with drugs and drug policy.

classifications identified that there is a hierarchy to evidence, with more ‘objective’ types of evidence being deemed to be ‘better’ forms than those commonly considered ‘subjective’. This hierarchy of forms of evidence, with the purpose of informing those who wish to articulate their data better so as to influence policy, have also been covered by Oliver and de Vocht (2015). Similarly, Alison Ritter (2009) has argued that drug policy researchers need to do more to make their evidence more understandable to policy-makers. Once again, the core subject position of the human as a rational actor is maintained under conditions of altering the state of exception so as to conform to ever-expanding criteria, often justified through claims of ‘complexity’.

These considerations of the problematic nature of achieving rational policy-making whilst still idolising it as the apparent solution to policy problems are present within drug policy analysis. An example is that of Marcus Roberts’ (2014) commentary on the relation between evidence and the need to engage stakeholders:

‘the scope of evidence to determine policy and its implementation is critical but also limited. This is not only because evidence is incomplete and often contested by the relevant expert and professional communities, but also because drug policy inevitably involves normative considerations that are not resolvable by ‘evidence’. We should therefore reject models of evidence informed policy development which assume that the gradual accumulation of more evidence will necessarily provide a fully rational basis for resolving policy disagreements or point us unambiguously to a particular policy solution’ (Roberts,<sup>11</sup> 2014: 955).

Roberts clearly identifies limitations of decision-making based on evidence; it is unclear, contradictory, and the process involves normative considerations. This should be a grounding from which to embark on an advocacy for valuing the normative, and shared, democratic potential of shaping, challenging, and deciding what we should value in drug policy-making. Unfortunately, Roberts goes on to argue the need to apply rational debate to the normative aspects.

‘It would be a useful project to make explicit the values implicit in drug policy positions and their relationship to matters of evidence and *to consider how we would create space for rational debate of these*

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<sup>11</sup> Chief Executive, DrugScope, United Kingdom

underlying ideas, drawing on disciplines like moral philosophy and political psychology’ (Roberts, 2014: 955; emphasis added).

Even where evidence is clearly, and explicitly, understood as having restricted value in being able to inform policy, rationality retains its privileged position, even if it does so in a slightly altered form.

Similarly, I had the opportunity to attend a panel discussion at the final event in the ESRC-funded seminar series on New Drugs, held at Kent University in 2016. Panellists were asked to talk, informally, about how the emergence of ‘New Drugs’ (NPSs, and an additional focus on PIEDs<sup>12</sup>) has changed their thinking about drugs. Professor Susanne McGregor discussed, amongst other things, her recent work involving the consideration as to what an alternative to the War on Drugs would look like (McGregor, 2016 in New Drugs Seminar, 2016, 13:00-13:45). Within her discussion, she raised the question:

‘of how is policy decided, the way that evidence does or does not inform policy decisions? And my experience is of there being two parallel universes, there’s a sort of universe which you find in this room full of expertise and knowledge and accumulation of evidence, and there’s the other world where the decisions are made’ (McGregor, 2016 in New Drugs Seminar, 2016: 18:27-18:57).

Of note here, McGregor employs a dichotomy between evidence and policy, as if the two domains are populated by separate people. Kari Lancaster (2016: 143) highlights some of the critiques of this way of conceptualising the evidence-policy interface, but of particular interest to the genealogy that is presented in this thesis, many of the people in the policy-making processes were experts, indeed they were employed because of their expertise and were expected to produce more evidence specifically to inform policy. However, McGregor’s response employs a common perception, characterised by ‘two worlds’ separated by different modes of thought, where politics is the domain of one and evidence (and reason) in the other – as though they exist in opposition to one another (see also Caplan, 1979).

After the panel speakers, in the questions from the floor that followed I asked McGregor if – given that these two worlds are so far apart – would it not be the responsibility of those of us ‘in this room’ to not expect the decision-makers to come

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<sup>12</sup> NPS: Novel Psychoactive Substances; PIEDs: Performance and Image Enhancing Drugs (which sometimes includes cognition enhancers, as it was the case for the seminar series, see also HED, n.d.).

over to our world, but for us to shift over to them. Her response discussed the pressure researchers are put under to make their findings understandable or accessible to policy decision-makers conforming to principles of bounded rationality – solutions of the same kind as those outlined to the evidence-policy interface outlined above – but she felt that the techniques pushed towards researchers to this end was ‘not getting us anywhere at all’. A more systemic problem, she identified, was that there is no longer any space left for deliberation, dialogue and discussion (54:27-55:50). She finished by saying:

‘I think we can only contribute to trying to change the politics in our role as citizens and public beings. I don’t think, anymore, experts can change themselves and become, you know, it’s not their fault, I don’t think so, I’ll defend the experts. [Laughs]’ (McGregor, 2016 in New Drugs Seminar, 2016: 55:55-56:12)

In this exchange, we see McGregor’s unease with the notion that researchers can achieve the rational ideal of evidence directly informing the policy process. But just as Roberts calls for a space for rational debate after identifying the limits of evidence, McGregor returns to the role of the researcher, as a citizen, to use evidence to inform policy after dismissing these very same techniques as ineffective.

What these ‘exceptions’ demonstrate is that for as much as the limitations of rationality and evidence in the developing of policy-making practices are known and remarked on, rationality is continually returned to and maintains its privileged status. The question of how to gain rationality and evidence in policy-making are repeatedly asked as if we are unable to comprehend the epistemological impossibility of their solution. Although these limitations are tacitly accepted, it is continued as if the limitations are only a matter of technique, rather than of a fundamental ground. Which raises question: what is the point if it does not lead to a change of action?

## **§2.5 Concluding on ‘The Privileging of Rationality’**

It worth highlighting that the situation of advocating for the more effective use of evidence in developing a more rational drug policy does not stand in opposition to a current situation that advocates for something other than a rational evidence-based policy on drugs. Whether on the side of the status quo or of that of reform, a form of logic is in play which those who are using it would claim is rational:

‘In the contemporary scene it might appear that the findings of science are the more applied to ongoing drug policy debate and formulation.

According to prohibitionists – at least when they are not preaching that drugs are ‘wrong’, the ‘scourge of humanity’ and a ‘universal evil’ – science is their mainstay and an inexhaustible well for proving the necessity and effectiveness of prohibitory policy. Reformers echo a similar but antithetical line, quoting statistics and think-tank studies in their argument that prohibition has failed as a solution to drug use and therefore must be part of the problem’ (Webster, 2003: 343).

At stake then should not be arguments about how to make one side *more* rational, they are already – as far as they are concerned – rational. The fact that a conclusion (say, the appropriate way to formulate drug policy) may appear rational from a set of premises (perhaps, drugs are harmful, and we want to reduce harm), belies that that is *our* reason; others can achieve alternative conclusions from the same points whilst being just as reasoned. This is the consequences of a world not made on natural foundations, but on contingent language.

This issue of rationality being privileged as the solution to the problem of drug policy is not a recent one. Indeed, Helmer identified it back in 1975, considering it one of the myths of narcotics policy. As he put it:

‘Present public policy toward narcotics is an inheritance of the irrationality, ignorance, or confusion of the past and *can now be superseded and reformed by rational and scientific solutions*. The truth is, that, from the beginning there has always been reasoned scientific support for both prohibitionist and nonprohibitionist positions... Expert evidence on narcotics may have changed... but the role of science and the expert is little different now from what it was’ (Helmer, 1975: 7; emphasis changed).

The inheritance of ‘irrationality’ and ignorance to which Helmer is referring is that of racism, and with this we find a microcosm of the larger problems with which the thesis are engaged. Helmer identifies how identity (in his case race and class) informs the logic of drug policy. But rather than understanding drug policy as an issue of racial justice or of class-based injustice, it is reduced to a technocratic logic where the ideal of rationality has been missed (perhaps he would argue ‘corrupted’), but that it should be aimed for. As Doris Provine (2007: 32) argues, with the institutional support and the ideological purposes that prohibition serves, unless drug policy becomes a civil rights issue there is unlikely to be change. In other words, the analysis of drug policy needs to move away from technocratic rational models of the policy-making process.

## Summary

In this chapter I have argued that rationality holds a privileged status within the work of a strand of social policy and drug policy scholarship. This has its roots in the academic tradition of social policy, which came under scrutiny in the 1960s as a result of policy failure, leading to epistemological critique. These critiques of empiricism challenged the possibility of the rationality project of social policy. Whilst many scholars have advanced alternative theorising of the policy process that advocate alternative principles, the mainstream reaction has been rather one of an accommodation, reconstituting rationality in ways that maintain its privileged status – most evidently today in realism and evidence-based policy-making. Drug policy scholars, being largely involved with similar debates as those of wider social policy scholarship, also privileges rationality. Indeed a lack of rationality is framed as the reason for the failure of drug policy, and the (re-)introduction of rationality is considered the solution to this failure. This is maintained despite the epistemological limits of rationality, and even the tacit acceptance that it is impossible to achieved.

This is the background to which this thesis is concerned with. Attempts which continue to follow the current paradigm of (technical) rational policy-making in regard to drug policy are doomed to perpetual failure. So long as faith remains solely with evidence and decisions grounded in rationality, the same results will occur time and time again. As alluded to above, the privileging of rationality can only be maintained with an essentialism of drugs and the policy process. Such a conceptualisation turns interrogation towards the internal of the drugs themselves, failing to account for the discursively concealed histories of struggle and their political production. This problem of essentialism will be returned to in Chapter 3. In the next chapter I continue with the matter of social policy, and provide an alternative account of policy-making, that has been developed by a group of scholars within the field of critical social policy. This account radically rethinks the policy-making process, and as such is able to move away from models of rationality, towards one that centres identity.

## 2. Critical Social Policy and Identity

### Introduction

Having outlined the centrality of rationality within social policy scholarship and its privileged status within the field of drug policy, the question now arises; what can be understood as the organising principle of social policy? This chapter turns to work produced by a group of scholars with critical social policy to outline the centrality of the identity of subjects to the policy process. In this chapter, I will introduce the role of identity for the first two elements of social policy that this thesis puts forward as part of the tripartite assemblage of imagined citizens, policy-makers, and objects that are coordinated through identity. Here I draw on:

‘a lineage of psychosocial, critical race-informed and critical feminist-informed policy scholarship, which has used the study of social identity and human power and agency to rethink the essentialising terms of ‘mainstream’ social policy and welfare debates’ (Dobson, 2015: 687).

Imagined citizens and policy actors emerge from perspectives that have been built within a body of critical social policy scholarship, the latter developing out of the former. Section 1 covers the notion of the imagined citizenship and is drawn from the work of Fiona Williams (1989 [1995]), and her refutation of mainstream social policy’s universalist accounts of the welfare state. Rather than universalism, the welfare state is organised through the particularistic notions of *Family*, *Work*, and *Nation*, which map onto gendered, classed, and raced assumptions about the population. More recently, critical social policy scholars have come to turn the analytical lens towards the role of policy-makers and their identities in policy-making. The work of Clarke et al. (2015), Law and Singleton (2014), Hunter (2008), and Ahmed (2004) are useful here for thinking through the welfare state as an enactment and assemblage with a ‘reasonably temporarily coherent form’ (Hunter, 2015: 22), which is the focus of Section 2.

This theorising of the state involves a conceptualising of the policy-maker not as a ‘rational agent’ which is central to the West’s conception of self (Mansfield, 2000: 13-22), but as a ‘psychosocial subject’ – that is both psychic (individual) and social (collective) at the same time. The psychosocial subject and its implications for the



investigation of a social policy analysis is the focus of Section 3. A psychosocial subject is understood to have a limited ability to recall the past ‘as it was’, which influences the interviewing strategies that can be employed in research. Because the individuals involved in policy-making over the period the genealogy covered in Part III can be considered both psychosocial subjects and elite participants, there is also a conflict between desired interviewing strategy, and one suitable for the potential participants. This is especially the case because the elite participants are trained in disciplines that model the individual as rational agents, and therefore (may) take issue with my methodological approach to interviews. The compromise is a Biographical Narrative Interpretive Method-informed approach that is sensitive to the power dynamics between me as a junior researcher and my participants as senior academics and professionals.

## **§1. Identity of the Imagined Citizenship**

The importance of imagined citizenship in policy-making (for the centrality of identity) is probably the most intuitive of the three interrelated elements that this thesis asserts as being constitutive of social policy mediated by identity. However, that the imagined citizenship has an identity does come up against traditional mainstream social policy scholarship which has tended to assume a universal welfare subject. As Rachael Dobson (2015) explains, providing a very good introduction to critical social policy scholarship;

‘Critical social policy came out of critiques of a UK-based and Fabian influenced social policy and administration tradition, which supported and defended a universalist welfare state on the basis of the deleterious effects of social divisions, understood primarily in relation to class (Sinfield, 1978<sup>13</sup>; Titmuss, 1958<sup>14</sup>). Writing from the early 1980s, critical social policy scholars argued that the universalist imperative failed to address the complexity and particularity of human experience, as it related to service users’ power, agency and identities. Researchers sought to give voice to the experiences of specific social ‘groups’ and new social

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<sup>13</sup> Sinfield, A. (1978) Analyses in the Social Division of Welfare. *Journal of Social Policy*. 7 (2) pp. 129-156

<sup>14</sup> Titmuss, R. (1958) *Essays on ‘The Welfare State’*. London: Allen & Unwin.

movements (Taylor, 1996), recognising the tensions that ‘particularity’ posed for those working for universalist principles (Williams, 2000<sup>15</sup>)’ (Dobson, 2015: 695).

Among the early scholars who took umbrage with rationalistic and universalistic accounts of the welfare settlement was Fiona Williams. In her *Social Policy: A Critical Introduction*, Williams (1989 [1995]) takes aim at the mainstream of social policy scholarship. She argues that, rather than universalism being the modality of social policy, the ‘organising principles’ of welfare in the UK (and the West generally) have been ideas of *Work*, *Family*, and *Nation* (pp.xiii-xiv). These map to the relationships of class, gender, and race respectively. The development of welfare, she argues, has always had particular ideas of what is constitutive of the family unit, the nation, and its workers. The extent to which these ideas have been explicit has varied over time, which is important in a post-racial horizon where ‘race’ and ‘racism’ become considered consigned to the past, yet remain ever present (Hesse, 2011).

Williams argues that these ideas have helped to structure the classed, gendered, and raced relations that compose the state, and is critical of social policy scholarship for treating these relations as merely being a part of social policy rather than fundamentally underpinning social policy. For Williams (1995 [1989]: 149), ‘the welfare state [i]s part of a racially structured and patriarchal capitalism’, and as such these relations should not be peripheral to social policy as demonstrated by gender and race often being contained to a single chapter in social policy text books, but rather should be central to the analysis of social policy.

Williams (1995 [1989]) demonstrates this sort of analysis via a consideration of British social policy from the early 1800s through to her time of writing. Early state intervention (1830s to 1880s) in the wake of industrial capitalism and *laissez-faire* ideology acted to create conditions considered favourable to the free market. In this period, the role of women as responsible for social reproduction and caring for wage-earners and dependents was established: ‘a forceful ideology of women as subordinated to men, mentally and physically, was reinforced through religion, science and medicine (Ehrenreich and English, 1979<sup>16</sup>)’ (p.151). Similarly, Darwinist

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<sup>15</sup> Williams, F (2000) *Four Methodologies for Researching Moral Agency, Workshop Paper 16*, Centre for Research into Care and Values, University of Leeds.

<sup>16</sup> Ehrenreich, D. & English, B. (1987) *For Her Own Good: 150 Years of the Expert’s Advice to Women*. London: Pluto Press.

pseudo-scientific racism of the 1850s with beliefs in cultural, religious, and racial superiority made justifiable some of England's more abhorrent colonial actions. These two strands resulted in policies such as the 1834 Poor Law, The Factory Acts, and the East India Act amongst others, which severely curtailed women's and Black people's entitlement to benefits. For women, it was the responsibility of a male husband or other relative, whilst for Black and Irish people entitlement was conditional on length of residence and failure to satisfy could result in the use of the 'power of removal'. In this we can see how the organising principles of *Work*, *Family*, and *Nation* provide rationales for social policies.

According to Williams, the first major reforms to the welfare state occurred between the 1880s and 1930s, as the inherent contradictions and inconsistencies of *laissez-faire* capitalism had failed to ensure the Empire's unmatched superiority in the world, and resulted in periods of unemployment that threatened political stability. The political response was to combine the notion of collectivism within a notion of social imperialism, subordinating class interest to that of nation and empire. Social reform (for the working class) was the manifest benefit of imperial policy, at least in the beliefs of the trade unions. Entitlement to welfare benefits thus became connected to nationality. Women's role in social reproduction was further reified as policies developed to improve the health and education of children to maintain the 'Imperial Race', all 'sustained by a powerful ideology of the supremacy of British culture and the British race over others' (Williams, 1995 [1989]: 157). With this, work, family and nation came to intersect and mutually reinforce one another in the formulation of social policy.

Rationalist models of social policy suggest that the decision-making process and implementation of policy is made on rational technocratic grounds, and therefore those who wish to influence policy need only to provide the right knowledge ('evidence') from which a policymaker can know how to select the right option. However, Williams' analysis disrupts mainstream social policy accounts and presents a theorising of the welfare settlement in which the identity of the imagined citizenship (through notions of work, family and nation) has central importance for the logics of policy-making. The imagined citizenship is not a universal subject, but rather particular, the identity of the imagined citizenship benefiting those that conformed to this imagining, whilst being a detriment to those it excluded. This analysis has been

very informative for critical social policy scholars, who have gone on to expand it, considering the expansion of the importance of identity to the policy-makers of the welfare settlement.

## **§2. Identity of Policy-Makers**

In the previous chapter, I noted how within a significant strand of mainstream social policy scholarship, policy failure came to be understood as an implementation gap between designers of policy (policy-makers) and those tasked with delivering (service providers). Within this scholarship, policy retains a location in which it is simply made by policy-makers through legislation, briefings, documents, etc. Policy is simply a *thing* that resides somewhere, usually in its institutional basis (i.e. policy is what governments *do*, Clarke, 2004: 108). This conceptualisation of policy has been unsettled by a body of scholarship within critical social policy – drawing upon critical-race, critical-feminist, and psychosocial thought – which has troubled the basis of its constitution (Dobson, 2015). These scholars have argued that policy is rather an enactment of *doing* policy, maintained through uncertain, contested, but also apparently fixed and mutually supportive assemblage of actors. Policy is the result of a multitude of heterogeneous practices performed in various location by multiple actors (Law & Singleton, 2014: 381). In this section, the argument is laid out, the relevant heterogeneous practices are drawn out, and their implications for interrogating policy are considered.

The early post-war welfare settlement was founded on universalist and rational principles. Recipients of welfare, the welfare subjects, were understood as individuals who were in some way lacking or pathological, incapable of making reasonable judgements for themselves or others (Hogget, 2008: 66). Williams (1989 [1995]) challenged how the solidarity imagined by Beveridge was a particularly patriarchal one, with the white male bread-winner at its centre. Social movements of the 1960s and 1970s produced a sustained critique of the rationalist models of welfare which they deemed as producing disempowered welfare subjects, taking aim at the solidarity and universalism which was at the same time used to exclude. These accounts were predominately structuralist in their analysis (Hogget, 2008: 67-68). Hogget (p.69) argues that, within these critiques, a refusal to turn a lens on the welfare subject and

to be able to criticize them caused a mirror of the original problem to emerge where the welfare subject is always good, the system always bad.

The result was ‘an unhelpful dichotomy in which either everything is blamed on the system, or everything is blamed on the subject’ (Williams & Popay, 1999: 157, cited in Hogget, 2001: 37). We see this same problem developed in consideration of implementation failure in social policy. Previously, top-down, and bottom-up conceptualisations were outlined as predominant models of social policy analysis (Dickinson, 2011). Each provided a means for understanding policy failure. Either there were problems with the policy decisions of the top not being followed through properly by those intended to deliver, or those at the bottom tried to manage the impossible to deliver policies designed without due consideration of problems ‘on the front line’. Either the system is bad, or the policy implementers are bad.

Paul Hogget (2001; 2008) has advocated for a more considered understanding of the welfare subject, one where they are not considered in such unitary terms of rational or pathological, good or bad, but rather that they be taken as beings that are complex and different in various moments. This approach is situated within a rejection of the human being as a purely rational subject, one capable of being able to account for all of its actions with full understanding of its motivations; in other words, with fully autonomous agency:

‘We may act involuntarily, against our better judgement. We may act impulsively and bear the cost or enjoy the benefit later. ...To say that actions may have unintended consequences suggests that we had an intention but the consequences were not what we expected (the road to hell...) *but this eludes the point that actions themselves may not be intended*. Rationalist accounts cannot help us to understand the mother who wants to scratch and pinch her new-born child, or the successful young man who withdraws into an inertial state, convinced that he is a failure. These tragic, everyday occurrences remain largely inexplicable within a rationalist model of agency. We do not always know why we are doing what we are doing as we do it’ (Hogget, 2001: 52; emphasis added).

For Hogget, we are better to understand the human subject not as a unitary and knowledgeable self, but rather to construe of them as having ‘a number of selves each in relation to the other’ (2001: 53).

David Taylor picks up similar concerns of Hogget’s and ‘argues for the centrality of the concept of social identity in contemporary analyses of social policy’ (Taylor,

1998: 329). What Taylor attempts to resolve is how is it that we come to think of ourselves as having a coherent identity whilst at the same time it is multiple. The distinction between *unity* and *unitary* is proposed by Taylor, and to this end they define two uses of the notion of identity; *categorical identity* and *ontological identity*. The former captures those identities we inhabit that we share with others, whether sex, gender, class, etc, whilst the latter covers the coherent sense of self. The two are not discrete or opposites to each other, ‘ontological identity is only realised through categorical identity and categorical identity is the expression of ontological identity within social relations’ (p.340). The importance of this for Taylor is around how claims of identity can be imposed on individuals in essentialising ways that diminish their ability to claim other identity positions.

These ideas by Hogget and by Taylor are part of a body of scholarship which Dobson (2015: 687) argues is informed by psychosocial, critical race-informed, and critical feminist-informed thought, which has focused on social identity, human power and agency, to radically rethink social policy. The notion of social identity has come to rethink the relationship between the individual and the social; no longer discreet entities but ones that highly inform one another. However, in the accounts so far we have been restricted to conversations of the welfare subject; how they should not be understood as ‘lacking or pathological’, failing to competently make rational decisions; they are in fact motivated by multiple concerns; non-rational action is part of being human. There is no reason why these accounts of the welfare subject should not be applicable to any human subject, in particular other policy-subjects. When these considerations are expanded to include other policy-subjects we start to understand social policy as an assemblage.

Hogget’s and Taylor’s contributions to rethinking social policy has been picked up by Hunter (2003; 2015). Hunter (2003: 332), argues that, although critical social policy has made important conceptual progress in terms of the welfare subject:

‘Policy makers, for the most part, remain unidimensional in that they would seem to adhere to the dominant policy discourse by virtue of their interest in maintaining their powerful position within the policy-making process’.

The space for policy-makers to have agency is therefore diminished, reducing them to the status of automatons. This comes up against two problems with the concept of social identity. First, policy-makers are not *just* their professional identities, they also

have social identities which inform their actions. Second, it assumes policy-makers are distinct from welfare users and inhabit different spaces, whereas in practice policy-makers or practitioners are also welfare users (e.g. a nurse also uses healthcare, a teacher also sends their kids to schools). The concepts of categorical and ontological identity provide the ability to begin to explore the multiple social locations we embody, and their tensions with our Eurocentric sense of singular self. However, they do not account for why certain identities come to the fore at different times and become important in any given occurrence.

Central to Hunter's analysis is a conceptualisation of the emotions as being productive of power. For Hunter, emotions 'operate as connecting devices, bringing together multiple actors and objects into the reasonably temporarily coherent form we think of as the state' (2015: 22). Here Hunter is taking influence from Sara Ahmed's concept of affective economy, a reworking of Marx's theory of capital (Ahmed, 2004). By affective (often written with capital 'a'), I mean the movement (or work) done by and through emotions. Ahmed writes about how the emotions are the effect of the circulation of signs – the movement of signifiers produces affect. Over time and through repetition of the circulation of signs, emotions become 'stuck' to their sign. In this way, bodies and objects become aligned in particular ways:

'[emotions] work as a form of investment, it endows a particular other with meaning and power by locating them as a member of a group, which is then imagined as a form of positive residence (that is, as residing positively in the body of the individual)' (Ahmed, 2004: 49).

And it is through the emotions that 'we' attach ourselves to others (p.50), 'how we feel about others is what aligns us with a collective, which paradoxically "takes shape" only as an effect of such alignments' (p.54). It is through the emotions that people invest (or distance) themselves in ontological and categorical identities.

Hunter advocates the concept of relational identity to account for the processual, fluid and constantly in flux nature of identity emerging through the interplay of ontological and categorical identities; identities formed through our bibliographies and relationships with others. Whilst ontological identity is marked by difference, and categorical identity marked by similarity, relational identity is characterised more by recognition and connection:

'Relational identifications occur on the basis of the relationships/connections between individuals who might not come

from the same perspective, but who can still share a common purpose’ (Hunter, 2003: 339).

For policy practitioners, relational identity is at play at the moment of policy design and implementation. When thought about in this way, it gives us the idea of policy as enacted: it cannot be understood as simply being, but rather something that needs to be performed and brought into being.

The notion that policy is enacted means that policy can no longer be considered singular either. Every time a service provider interacts with the acts of policy provision, services users, responding to dictated changes, bring to bear their relational identity on the policy enactment and in those moments enact it differently. Enactment of policy is therefore varied between actors and variegated by actors whose relational identity is differently called on in different moments. Because it is varied across actors, we start to understand the need for the notion of assemblage. Multiple actors, all enacting the policy in (if only slightly) different ways produce the effect of policy.

But the extension of policy as enactment and identity as relational is that many more actors need to be understood as involved in the policy process. From this policy cannot be taken as ‘a singular entity: it is put together – or assembled – from a variety of elements that are always in the process of being reassembled in new, often surprising, ways’ (Clarke, et al., 2015: 9). Policy is not just the diktats from politicians on high, or the plans made by civil servants or those on the front line, but also the experts consulted to inform, the resources used or potentially used in design, delivery, and communication, the spokespeople and communications teams, and the public and media responses. This is distinct from notions of ‘discretion’ in policy process literature (e.g. Evans, c2010) because the assemblage multiple actors are part of an assemblage which *constitutes* the enactment of policy and maintains it in a form that makes it far more fluid than its usually rigid conceptions invoked in mainstream social policy scholarship.

Policy as assemblage and enactment is important because it:

‘trouble[s] the ‘fixities’ proffered to terms and concepts associated with social policy and welfare research, like ‘welfare organisation’, ‘social policy’, ‘the welfare state’, ‘society’ and ‘neoliberalism’, which are often conveyed as atomised, essentialised and determining entities that make things (e.g., workers, welfare users, policy, organisations) move or happen’ (Dobson, 2015: 688).



It moves us away from foundationalist and essentialist assumptions of social policy and the policy-making process. Even the term ‘policy-making’ becomes problematic as it infers a distinction between design and implementation that cannot be maintained under the notions of assemblage and enactment.

The critical social policy scholars highlighted above have come to retheorise social identity in relation to social policy in ways that have radically challenged mainstream essentialist conceptualisations. The notion of relational identity not only moves us away from notions of the singular, rational ‘man’ towards one that is a multiple and emotional subject, but policy itself becomes reconsidered through the implications of this framing of policy subjects, and no longer can it be taken as a monolith, but as a temporary assembled enactment. This theorising provides us with the centrality of identity of policy-makers in social policy, where policy-makers are not just government officials.

### **§3. Psychosocial Subjects and Interviewing**

I have highlighted the contribution of Hogget (2001; 2008) in challenging the welfare subject as an ideally rational subject, but one who had unfortunately lost their faculties in some way to be rational. Expanding this account to include all policy subjects enables us to consider the state and policy as an enactment rather than a fixed ‘thing’. This challenging of the human subject as a rational subject is again picked up because it has implications for how we can conduct the interviews of this research and how to evaluate the accounts provided in them. In simple terms, the accounts provided in interviews cannot be considered to be mere reflections of the truth of what did or did not occur.

The question as to the validity and reliability of the interview response is largely noted to be falling short of expectations from a positivist orientation. However, these explanations place the failure of accuracy as something that occurs as a misfortune of the frailty of the human mind to recall accurately and can be overcome in various ways methodically (Foddy, 1993). They maintain the essentialising notion of the human subject as a rational subject, who can ‘tell it like it is’ (Hollway & Jefferson, 2013: 9). Here, how to conduct interviews in a manner that is sensitive to the implications from the rejection of the human as rational subject are explored. I begin with a move to an understanding of the human subject as a psychosocial subject.

In *Doing Qualitative Research Differently*, Hollway and Jefferson (2013) begin the introduction to their research project with a reflection on an apparent paradox that exists in the research on the fear of crime. They note that, from the British Crime Survey, there is a persistent result year-on-year that women, especially older women, have the greatest fear of crime, but that statistically they are the least likely to be the victims of crime. At the same time, young men are the most likely to be the victim of a crime, but have the lowest fear of crime. Hollway and Jefferson pose the question: why is it that people's perceptions of crime, measured by their fear of it, bear little correlation to their actual likelihood of being a victim? They suggest, drawing on the same ideas as Hogget (2001; 2008) and others, that the research participant is not a fully rational and self-knowing subject. They advocate a re-evaluation of the interview subject, coming to understand them as a defended and psychosocial subject.

The defended subject comes from psychoanalysis. We defend ourselves subconsciously from things and aspects of ourselves which might be threatening to our sense of self (our ontological identity). Threats to the self are assumed to create anxiety within the individual. Hollway and Jefferson (2013: 17-19) in particular draw on the psychoanalyst Melanie Klein who developed theories about the self being forged out of unconscious defences against anxiety.<sup>17</sup> For Klein, as we develop we are met with experiences that we encounter with polarised emotions of both good and bad, and objects (including people) are often given unrealistic characteristics of good and bad, with parts of ourselves that we consider bad being 'split off' and projected onto others. However, objects are not necessarily characterised as solely good or bad, with ambivalence (in its true sense) being contained within the same object. Emotional ambivalence is a core tenet of the psychosocial subject.

Klein's argument for the 'splitting off' of parts of the self which we might find unpalatable itself derives from Freud's work on the mind as being capable of producing inconsistent thoughts and beliefs, and able to adopt two separate points of view (Freud, 1938, cited in Hollway & Jefferson, 2013: 17). Freud was the first to develop a theoretical – or 'scientific' – account of the unconscious (Mansfield, 2000:

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<sup>17</sup> I would like at this point to take the opportunity to note that whilst I agree with the notion of a defended subject, I do not necessarily agree with the foundational assumptions of the developmental nature underpinning it inherent in psychoanalysis. The question of determination in psychosocial studies is still contested (Frosh, 2014).

26). For Freud, the unconscious was a domain where our impulses resided, spewing forth in uncertain ways (e.g. the ‘slip of the tongue’).

‘What Freud presents, therefore, is a subjectivity ...of potentially violent energies and conflicts, where negative feelings do not merely lapse from the conscious mind, but where they are kept in place by a force against which they constantly struggle’ (Mansfield, 2000: 30).

The subject is therefore split between the conscious and unconscious self.

Because of the relationship between the conscious and the unconscious, Freud argued that the distinction between the individual (‘inner world’) and the social (‘outer world’) cannot be maintained in its standard form. The individual, even before birth, is always involved in complex interactions with others:

‘the ‘inner world’, from before day one, is populated, as it were, by relations to others, and hence is better understood, less as a distinct and separate sphere, than as a fold within the ‘outer world’” (Stenner, 2014: 207).

Psychosocial approaches take as a starting point that the psychic (the mind, consciousness, ‘self’) and the social (others, groups, figurations) are ‘always implicated’ in one another (Frosh, 2014: 161), and neither is reducible to the other. The emotions are the connective tissue between our psyche and social entanglement – the ‘psychosomatic soil’ (Clarke, Hoggett & Thompson, 2006: 11).

This has implications as an approach that takes the interview subject as a psychosocial subject, raising major questions as to how one can understand the interview process. Psychosocial subjects negotiate multiple potentially contradictory and anxiety-inducing categorical identifications through unconscious defence mechanisms. The fact this occurs unconsciously – that it is not entirely ‘rational’ in the traditional sense – means the processes involved are not available for the interviewed subject (it cannot be taken that the interview subject is a self-knowledgeable subject).

A relational approach holds that the way these contradictions in the subject are resolved is that they are played out – or are ‘lived out’ (Hunter, 2012: 5) – in the everyday practices of subjects. As Hollway and Jefferson (2013: 7-10) note, if those we interview are not able to be fully knowable and able to recall directly (because they’re a psychosocial subject), then they cannot be assumed to be able to ‘tell it like it is’. This raises a question around our ability to be able aware of (even tacitly) the reasons and motivations for doing something at the instance of doing something, or is

the rationalisation and explanation something we come to after the event? (Hogget, 2001: 39). Hogget's response is that of the latter:

‘Choice, then, is not simply something which occurs after reasoned deliberation, most choices we make are made on impulse in urgent and contingent encounters in which we have to make on-the-spot decisions as our own and others' needs, expectations, phantasies and feelings press in on us. Indeed, for much of the time we are not even aware of having made choices, it is as if they catch up with us later, often much, much later when the reasons for key choices in our lives – of partner, job, lover, etc. – become clear to us’ (Hogget, 2001: 40).

The interview subject cannot be expected to recall events, or motivation for actions, in a manner that is able to access the ‘truth’.

In trying to resolve this dilemma, Hollway and Jefferson were fortunate to come across the biographical-interpretative method. They deemed it to have several benefits over traditional interviewing techniques. First, it rejects the assumption that language and meaning-frames are necessarily the same for researcher and researched. The biographical-interpretive method therefore uses open-ended question for interviewees to provide their accounts in their own terms. Second, interviews should be aimed at *eliciting stories* because the interplay between the individual and the social is only resolved in action, and the only way to uncover people's real reactions and motivations is to ‘get at’ the actual experiences of individuals. Narratives ‘have the virtue of indexicality, of anchoring people's accounts to events *that have actually happened*’ (Hollway & Jefferson, 2013: 32; emphasis added). Third, this means avoiding ‘why’ questions. These lead the interview participant to tend towards intellectualisations and generalisabilities of what they ‘would normally’ do, which in reality is different what they actually do in practice (see also Potter & Hepburn, 2008: 297-298). Fourth, follow-up questions should use the same wording as the interviewee, in the same order, to assist in eliciting narratives while not imposing interpretation. To this, Holloway and Jefferson add the principle of free association:

‘The principle of free association is based on the idea that it is the unconsciously motivated links between ideas, rather than just their contents, that provide insight into the emotional meanings of interviewee's accounts’ (Hollway & Jefferson, 2004: 404).

Tom Wengraf (2001) developed the Biographical-Narrative-Interpretive Method (BNIM) with these principles embodied within an explicitly psychosocial

orientation.<sup>18</sup> He advocates the use of a single question which is worded to encourage the interviewee to speak freely and for as long as they like, with the interviewer then following up with questions based on this trying to elicit further narratives. Wengraf suggests that the interviewer may have to ‘push’ for narrative accounts repeatedly. The BNIM methodology is an intensive form of research, usually very formulaic, and as such ‘sample sizes are typically small’ (Corbally & O’Neill, 2014: 36). These qualities of producing large amounts of data from a small number of cases was ideal for this study given the small number of potential participants involved in the various stages of the case study.

### **§3.1 Narrative Interviewing and Elite Subjects**

Understanding the interview participant as a psychosocial subject, and therefore the need for narrative interviewing, this subsection considers some of the limitations that occur within the context of the social policy scholarship outlined and this case study specifically. Hollway and Jefferson (2013) conducted their research with lay members of the public, for whom questions of ontology, epistemology, and validity of data are not particularly important. However, when designing the research strategy for this project, it was clear that the vast majority of the potential participants came from academic backgrounds, usually trained within the ‘hard’ sciences. Furthermore, they were what could be called ‘elites’ (Odendahl & Shaw, 2001). This raises a number of further method and methodological aspects. This was complicated by the fact that;

‘while the methods used to study ‘elites’ are of particular relevance in policy research, to date there has been little examination of the particular challenges associated with “elite” interviewing in this field [of social policy]’ (Lancaster, 2017: 93)

These challenges are compounded when elite subjects are also understood as psychosocial subjects. Based on my literature searches, BNIM interviewing with elite populations has not been conducted before.

Hollway and Jefferson (2013) developed their methodology in their study on the fear of crime through an engagement with the biographical-interpretive method, and it is this which led me to the Biographical-Narrative Interpretative Method (BNIM, Wengraf, 2001). This method of analysis suits the purposes of this research project in

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<sup>18</sup> Wengraf is uneasy with the term psychosocial, offering alternatives that capture varying aspects of nuance such as psycho-societal.

that it serves to both construct a history of events and locate subjectivities within that history and the history of the interview itself. However, the interview technique would not have been suitable for this project without it first having been altered. This is because I expected an incompatibility between the nature of the research participants who were sought, and the demands on them of the BNIM interview.

The identified individuals for potential recruitment and participation I considered to be 'elite' subjects. There is no definitive definition of what constitutes an elite for the purposes of the research process, with many researchers applying different criteria, remaining undefined within much of the 'elite interviewing' literature (Lancaster, 2017: 93). These definitions to a lesser or greater degree stress aspects such as the power that the subjects hold, either in general, within their given institution or in relation to the researcher. Sometimes the label is applied because of the subject's status within a network, the social capital they have, or their ability to influence decisions and agendas (Harvey, 2011: 432-433). For my context, a multiplicity of these apply. Those whom I hoped to interview held important positions within their respective organisations, influencing directions and agendas not only within those organisations but also outside them. In addition, they were also very established professionals within their fields, many holding professorships within universities, meaning the power balance between me and them would be very much in their favour.

These in themselves are not problematic, however their responsibilities make large demands on their time. The style of interview being extremely open, interviews can take (and require participants to be available for) potentially longer than two hours – something unrealistic when I should be aiming to request only 15 to 30 minutes of someone's time to increase my chances of getting an interview (Hindmoor, 2016). Furthermore, in large part they are medical scientists, trained in the techniques and paradigms of the natural sciences, and the BNIM interview usually contains only a single pre-determined question which is specifically designed for the interview participant to respond as fully as they can and in whatever means they wish. This stands in contrast to the traditional question-response-repeat format of interviewing. With participants whose elite status provides them with a sense of authority over the legitimate method of data gathering, they may not respond positively to that style of interview. A pure BNIM study was simply not appropriate for this research study.

As an example of the need to accommodate my participants' highly developed and ontologically held beliefs of what constitutes valid research questions, what is deemed evidence, how to elicit this evidence, and how to draw findings from them can be seen in the below exchange:

Interview, 08:26: I mean these are pathetic questions.

Interview, 08:30: Carry on.

ARB, 08:32: Erm...

ARB, 08:35: I'm sorry, erm, I'm not, not, sure how to respond to that, it's because, erm...

ARB, 08:43: As I say part of my interest is to understand the people involved with policy, and in making policy, behind policy, and,...

Interview, 08:47: Okay.

ARB, 08:47: ...and that, that, so more than just, cause a lot of, stuff around eviden', em policy analysis looks at evidence and how evidence is used,...

Interview, 08:54: Yes.

ARB, 08:54: ...it very rarely, looks at how, what the people involved, and the motivations behind how...

Interview, 08:58: Quite rightly so.

[Note: That stops me dead.]

ARB, 09:05: Well, I think there's, there is an element there which can be brought in to understand how these, just be like why, erm, sorry I wasn't expecting such...

Interview, 09:16: Well it's just such a strange question. What my motivation? It's multiple, motivations.

ARB, 09:22: Oh yeah, I wasn't assuming there was only one, but you know how there's that complex array...

Interview, 09:28: So, how can you, so what significance is it?

ARB, 09:31: So, the significance...

Interview, 09:32: What possible significance is it?

ARB, 09:34: Well it's how you...

Interview, 09:35: It's only, evidenced-based is evidenced-based, isn't it?

ARB, 09:38: Yes, but erm...

Interview, 09:38: Are you implying that I was trying to distort the evidence?

ARB, 09:43: Oh, god! Absolutely not! Absolutely not! Erm,

Interview, 09:46: So why ask the question?

These last five lines in particular reveal much about this particular participant's understanding of truth. The phrase 'evidenced-based is evidenced-based' is an appeal to objectivity, and tautologically so; 'isn't it?'. The follow up accusing me of implying they were biased and subsequent 'So why ask the question?' at my denial thus positions me as pursuing a line of questioning that fails to meet the criteria of objectivity.

In this above exchange, the respondent therefore distinguishes their position from my own in their own terms in a hierarchical fashion, one where my position is 'pathetic'. This participant's background, a senior academic in neuro-medical sciences, is representative of many of the potential participants. Others could have similarly held the same opinion, even if in the end none stated so in such explicit terms. What can be learned from this is that the field which I was investigating (or at the least some within it) has a strongly developed sense of the objectivity to the world. The exchange is a microcosm of the relational, material, and affective dynamics at play and at stake in this research – there is a clear relation of power operating here, one that is justified through an appeal to the foundationalist epistemology/ontology which this thesis works against.

Fortunately, I was able to recover from this exchange and managed to get a full interview with lots of relevant data, but this exchange – which happened early in my fieldwork – highlighted the extent to which BNIM, or even BNIM-lite, could be interpreted in ways that could create resistance. Having already foreseen the problem demonstrated in the interview extract above, I attempted to develop more traditional-style questions in advance of interviews, as semi-structured interviews have been considered best for research interviews with elites (Odendahl & Shaw, 2001: 309-310). Questions for my participants were based on the history that I was able to construct from the documentary evidence and the accounts of previous interviewees, and tried to stick to the principles of narrative interviewing. They were open-ended, I followed-up using the same terms and meanings-frames, free-association was encouraged (if resisted at times), and importantly I 'pushed' for narrative where I could.

I developed interview schedules that were tailored to each participant. This is because their location within the history of cognition enhancers was specific to themselves,



and as I accumulated awareness and details of events, my questions altered to explore events in more depth. As there was much to become aware of, and the highly interconnected nature of the potential research participants, it would have been preferable to interview some participants multiple times so as to develop their account of events. However, because finding enough time in participants' busy calendars was difficult due to their elite status, it was deemed inappropriate to request a second interview to what would likely be interpreted as going over the material again in excessive detail. On occasion follow-up emails asking for clarification were used. Originally intention was to provide participants with draft copies of analysis chapters, however as the project progressed and time became limited it was deemed that this was unnecessary. The exception to this was one instance where ethical concerns around anonymity and inferred disclosure arose – in this case the relevant section was provided for review but not for enhancing the analysis.

What occurred in principle was a BNIM/free-association informed approach to interviewing. Although I arrived with a pre-set list of questions, a necessity given the number of specific events that needed to be discussed and the short timeframe, interviews were allowed to go off topic, with free-associations allowed to provide insight into what was considered important to the interviewees. Sometimes this allowed small aspects of the history to be remembered. This is a great case for the awareness that although one may be committed to an anti-foundationalist approach, one must be cognisant that, in the main, the world continues as if foundations are firm and fixed, and that although things are overdetermined they still remain contingent (see Chapter 4). A major learning point in coming to understand how one can do an anti-foundationalist study is that you are having to meet the world as it believes itself to exist. This is part of the practicalities of engaging with elite subjects as psychosocial subjects in an antifoundationalist framework.

### **§3.2 Recruiting and Engaging with Elite Subjects**

The issue of power dynamics between researcher and researched is an area of much consideration within the literature on research methods (Ramazanoğlu & Holland, 2004 [2002]: 105-120; Kvale, 1996: 117-118; Fine et al., 2000; Christians, 2000: 142-144; Miller, 2012: 35-38; Martens, 2014). The researcher normally has a position of privilege in relation to those they research; they enter their space and take data from

their lives; they have power over how that data is used and presented; they can claim a truth over those they research which is hard to challenge; and ultimately the researcher is using those they research to their own benefit, whether for payment for work done, the reputation from the work, or simply for the benefit of attaining a PhD at the end of it.

Whilst some of these appeared in this project, the power dynamics were certainly not as one-directional. All of the people approached and interviewed were firmly established in their fields, holding prestigious positions within academic institutions, senior association posts, and board members of organisations doing important work. My relatively lowly position as a doctoral researcher in the field of social policy meant I was in most cases 30 or 40 (or more) years behind and likely never to attain similar status.

An indicator of the power imbalance can be gleaned from a note I recorded during the fieldwork. My first interview occurred earlier in my project than I had intended or indeed wanted. In my initial recruitment period I sent letters to potential participants in October and November of 2016 with the stated desire to meet in the New Year. This was to give myself time to prepare my interview questions. One got in contact stating that, although they did not see the worth of me researching the projects I was looking at, they were willing to meet me, and they had availability mid-December. Having got a potential participant to agree in principle to meet, especially a central actor in the history I was considering, I was in no position to ask for it to be moved back when they have already stated misgivings over my research.

We agreed a date and time. I booked my tickets so as to arrive one and a half hours early. I accommodated this time to ensure not being late, and to give myself space to deal with the anxiety of conducting my first research interview and an illness that flares up in relation to this anxiety. One week prior to the meeting I send them an email just to inform them I will be recording the meeting and send them the project information sheet. They ask what time I arrive at the train station, and I tell them the time with the explanation that it will give me contingency for any delays. My participant then moved the interview forward by that hour and a half.

The ability of my participant to move the interview without my agreement demonstrates a power imbalance between me and the people I researched.

‘The issue of control is fundamental to the elite interview and extends from the physical location of the meeting to the type of interview format used to elicit information, and to the interviewer’s presentation of self’ (Odendahl & Shaw, 2001: 310).

The movement of the interview was not a negotiation between two equals, but an enforced change of condition which had to be accepted. This power imbalance was present with all my participants, although because most of my participants wanted to help and I believe desired for me to do well, this particular episode (along with a moment in the interview discussed above) is where this power imbalance was most acute. But it was something that needed navigating throughout the project, and I always had to be aware of how my actions could open up micro vulnerabilities which I preferred to have control over.

## **Summary**

Critical social policy scholarship that has come to radically reconceptualise the nature of social policy. Taking a relational approach to social policy has come to constitute policy as an assemblage and enactment, with an expansive sense of what counts as policy actors. This body of scholarship has come to reposition the role of identity as a central aspect of the policy process. Here we have drawn on the critique of mainstream social policy scholarship by Fiona Williams to identify the role of the identity of the imagined citizenship, and drawn on scholarship (particularly of Shona Hunter) who extended Williams’ analysis to include the identity of policy actors. Which assemblage of identity that takes precedence in any given situation is the outcome of a relational politics (Hunter, 2015).

This theorising demonstrates policy-making to be a political rather than rational activity. It has also required understanding policy-makers as psychosocial subjects, which means that they cannot be considered to be able to ‘tell it like it is’, and this has implications for the interview process. BNIM has been used to inform the interview portion of data collection, it has however been altered to accommodate for the fact that the potential participants of those involved with the period of cognition enhancers in UK policy-making are to be considered elites whom likely hold alternative expectations of valid methodology.

Part I has looked at the issue of theorising policy-making within certain strands of social policy and drug policy scholarship, and how we can move away from models of rationality towards centring the role of identity. Over these two chapters the problem of the centrality of rationality in social policy and drug policy scholarship has been the focus, and how despite these problems and even in face of their tacit acceptance, rationality retains its privileged status. The theories of identity outlined above have been presented as one potential avenue for escaping this rationalist bind. This concludes the consideration of the centrality of the identity of subjects in the policy-making process. This outline of identity to imagined citizens and policy-makers within critical social policy scholarship is the body of theorising to which this thesis is a contribution. This thesis is a contribution by means of increasing the variety of the diet of examples that centres identity in its analysis. It also makes a theoretical contribution by extending this theoretical framework to include the identity of objects, which is considered in the next Part. Part II will draw upon discourse theory to argue identity in the formation of contingency over overdetermination.

## **Part II – Identity of Objects**

### 3. Discourse and the Overdetermination of Cognition Enhancers

#### Introduction

Over the next two chapters I consider the identity of objects, completing the individual theoretical elements which I contend interact with one another to constitute the practice of social policy. To do this I introduce the category of discourse, which has two important elements that are of relevance for the framework being developed in this thesis. The first, to which this chapter is dedicated, is the antifoundationalist condition of objects in the world. That is, a rejection of the ability to make reference to a final level from which truth can be read. The second, which is the substantive focus of the next chapter, is the contingent nature of objects which prevents meaning becoming free-floating. It is this interpretation of discourse which situates the work as apart from, but certainly not in opposition to, the STS-orientated critical drug studies which have also come to be critical of objects.

This discussion of discourse introduces us to our third ‘critical’ body of study (fifth if one includes critical race and critical feminism); critical history. The use of the term ‘critical’ in all these areas is that the body of research takes their object of study as a phenomenon to be studied yet is *critical* of that objects’ status as real or self-evident. This statement may seem counter-intuitive, but the discussion of discourse in this chapter will deal with this matter directly. Discourse, because it rejects the essence of things, means that objects must be appreciated for their historicity. This requires a re-evaluation of the conduct of history, in which traditional history is found wanting. With this we must reject a whole range of notions that enable the production of ‘progressive’ history, and replace them with new notions that provide the supports for the conduct of a genealogy. This theoretical framework outlines how objects do not have fixed determinants, but rather are overdetermined.

Once the theory has been outlined, the chapter turns towards an analysis of the discourse of cognition enhancers to demonstrate their overdetermination. This traces the discourse in the domains of the scientific research literature and the use-based research literature. The scientific research literature can be taken as discursive practices that assume that the identity of cognition enhancers exists within the drugs themselves (an internal determination), whilst the use-based research literature has tried to define the identity of cognition enhancers with reference to external relations

assumed within their use (external determination). However, under interrogation, it becomes clear that the identity of cognition enhancers is not a positive residency of a set of substances. Attempts to fix determination result in either an empty category or one so expansive as to be totalising – there is either nothing that unequivocally can be classified as a cognition enhancer, or it is allowed to encapsulate activities that are closer to medical or recreational use, and therefore loses its specificity. In both cases the signifier of ‘cognition enhancer’ becomes redundant.

## **§1. Critical and Effective Histories**

In this section I discuss a series of interrelated methodological considerations regarding the process of studying history. This serves two purposes: 1) if we are to reject foundationalist claims to objects, we must therefore accept their historicity; and 2) This thesis presents a genealogy of cognition enhancers in the UK policy-making agenda, therefore a keen sense of history is required. These reflections serve as guiding principles for the conduct of a ‘critical’ and ‘effective’ history of cognition enhancers which is the empirical focus of this thesis. As a central focusing point, we come to the influential French philosopher Michel Foucault (1926-1984) who ‘managed to invent, no doubt in a way related to the new conceptions of certain historians, a properly philosophical form of interrogation which is itself new and which revives History’ (Deleuze, 2003 [1986]: 37). Foucault’s insights into the conduct of history moves us away from a dispassionate, technical, and descriptive orientation towards history, and into a methodology that is critical of taken for granted assumptions within traditional history. This enables consideration of the more discrete, granular, and apparently mundane aspects of historical development and how things came to be the way they are. How things ‘came to be the way they are’ is a matter of contingency, which is the focus of the next chapter. However, we start by understanding the importance for the ‘new history’ with a consideration of the problems with traditional forms of historical interrogation.

### **§1.1 Problematising History and the Present**

Mitchell Dean’s *Critical and Effective Histories* (1997 [1994]) marks a split between different approaches to historical theory (pp. 3-4). The first, more applicable to the more ordinary account of history is a ‘*progressivist theory*’, is characterised by a meliorism that society is progressing towards betterment in an almost teleological

manner, driven by attributes such as reason, technology, production and so forth (this is akin to Whig history discussed briefly in Chapter 1). As discussed below, this gives trajectories of history that see the outcome as though in place from the origin discovered by the historian. The second is that of '*critical theory*'. Here, progressivist accounts are brought to bear for the lack of perfection they claim to be moving towards. Rather than moving towards a better world, present forms of reason and society are accused of working against the human subject, estranging the individual from their potential, emancipated self. Progressivist ideals become replaced by alternative ideals, with doctrines of praxis elaborated for their achievement.

The third, according to Dean, is to problematize; to trouble the given, to reject origin and end, to maintain the questioning when others be of the mind of having found answers. This final approach, to which a critical and effective history belongs, does not seek to find solutions but challenge sedimentations:

‘It seeks to remain open to the dispersion of historical transformation, the rapid mutation of events, the multiplicity of temporalities, the differential forms of the timing and spacing of activities, and the possibility of invasion and even reversal of historical pathways. It seeks to problematise those versions of history which regard it as the resting place of the identity of an ahistorical subject, and the scene of a final reconciliation of humanity with nature, reason or itself’ (Dean, 1997 [1994]: 4)

It is effective because it explicitly avoids the imposition onto history of the meanings and understandings generated by mere philosophical reflection.

This includes the meliorism of teleologies. There is a tendency within the work of historians to seek the ahistorical *spirit* of an idea. ‘the story of the development of [an idea] very readily takes on the language appropriate to the description of a growing organism’ (Skinner, 1969: 10-11; see also Foucault, 2002 [1969]: 5). The focus is then on seeing where an idea does or does not emerge in social and political thought. In such histories, ideas which bare a family resemblance are debated as to the extent to which they can be considered to share the identity of the given idea. Writers at the past moment of the idea are thus open to chastisement for having failed to have fully realise that idea (Skinner, 1969: 12). In this way the idea itself remains untouched, it exists in its complete form and we have just been moving to an ever-closer illumination of the concept. Given this, an internal coherence both to the idea itself and of its journey into its more fully realised state is given primacy to the extent where



contradictions become erased either by excessive generalisability or by being ignored entirely.

A corollary to this is the projecting of current ideas into the past. Whilst it is given that ideas will have necessarily gone through permutations over time, there will be a family resemblance identifiable that is capable of being recognised as that idea. However, because we stand as observers in the current moment and will thus hold the current plethora of understandings of that idea, we are consequently at risk of imputing the current understanding of the ideas into the previous moments of that idea. Hence, there is the risk of one suggesting that people had intentions and interpretations that they themselves would not have had, simply because those meanings were not, and would not have been, available to them. Through the various approaches one may have to for attempting to excavate the real meaning beneath the words of ‘what each classic writer says is unavoidably to run *the perpetual danger of lapsing into various kinds of historical absurdity*’ (Skinner, 1969: 7; emphasis added). One example is where an author could be considered to have meant to contribute to some grand idea purely by chance of a passing comment which used similar terminology, which they simply cannot have intended to contribute to. This often takes a form of an author being considered to be foreshadowing the development or explication of an idea that comes to fruition long after they have passed, as if clairvoyant.

These problems emerge from a position which considers that meaning can be derived from texts themselves; that we can simply collect the documents which testify to the idea with which we are concerned and from those alone elucidate the meanings to which they were meant to portray.

‘The point is that even when an historian of ideas addresses himself solely to the description of a text, and even when his paradigms reflect genuinely organising features of the text, the same essential danger still remains: the danger that the very familiarity of the concepts the historian uses may mask some essential inapplicability of the historical material’ (Skinner, 1969: 28).

One must be careful about according meanings to people’s intentions that would simply not be available to them at the time. This tendency can be seen in histories of drug policy, especially those trying to trace the regulation of drugs, when there is asserted that there were regulations over drugs in early societies. Such concepts would

not be meaningful for them. For example, when McAllister (2000: 9) argues that, before state policies, drug use was ‘regulated’ through social norms, it would be inaccurate to assume that the people this is referring to would understand their figuration in such terms.

The common alternative within the work of historians is to look for meaning from context in which ideas or works were in play. But this in turn can result in other ‘historical absurdities’, such as where the use of an idea is claimed to have been something other than what the user of the idea actual said; perhaps a statement is considered to have been made ‘tongue in cheek’ for fear of social reaction (Skinner, 1969: 32-33). Similarly, with a focus on meaning from context we find that changes in meaning of thought are taken to be mere reflections of the changes and developments in the social context in which the ideas circulated (p.41). Ideas will then become determinable by the context in which they are situated. A move into the tracing of an idea would simply become the tracing of the developments of a particular society, identifying the particularities of that moment’s essence *in* the idea; so we could imagine a description of the history of drug prohibition where we would have a 19<sup>th</sup> century prohibition, a 1920s prohibition, a 1960s prohibition, and so on, each reflecting the social mentality of the time. A consequence of this is to diminish the way that the idea itself is capable of causing change.

‘we must study all the various situations, which may change in complex ways, in which the given form of words can logically be used — all the functions the words can serve, all the various things that can be done with them. The great mistake lies not merely in looking for the ‘essential meaning’ of the ‘idea’ as something which must necessarily ‘remain the same,’ but even in thinking of any ‘essential’ meaning (to which individual writers ‘contribute’) at all. The appropriate, and famous, formula — famous to philosophers, at least — is rather that we should study not the meanings of the words, but their use. For the given idea cannot ultimately be said in this sense to have any meaning that can take the form of a set of words which can then be excogitated and traced out over time. Rather the meaning of the idea must be its uses to refer in various ways’. (Skinner, 1969: 37)

These reflections are obviously most suited in the problem of presentism; where the current object of study (the idea in question) is considered to have a positive residency and is projected into the past and disparate entities are brought into alignment retrospectively to justify and naturalise the present’s existence. However, during the

course of this project there has had to be care not to mirror, or inflect, the very same absurdities we discussed above.

Here, this problem comes from a presentism of a negative *thing*. Although what will be demonstrated in the genealogical account presented in Part III will indicate that there was very much tension over the status of cognition enhancers as something that existed (or were likely to even exist in the future), the publicly-facing documents and discussions regarding their occurrence suggested a different image. From the documents, following from the introductory history presented in the Introduction to this thesis, during the period in which cognition enhancers were on the policy agenda, their future occurrence was presented as explicit, unambiguous, and foreseen – in a way that if we were now living in a culture of ‘neuro-cosmetics’ we would be lauding those involved for their brilliant foresight.

However, in hindsight, the fact that cognition enhancers seem to have remained marginal at best can now far too easily turn into an historical absurdity where the proposed future was never going to occur. Those involved can be chastised for failing to have properly accounted for the present, although, as will be shown in Part III, many were sceptical of cognition enhancers’ future. For example, the fact the evidence to suggest the cognition enhancers would become widespread appears to have been minimal (see §2 below and Chapter 5), or the fact that much description that could have pointed towards Novel Psychoactive Substances (NPSs, commonly known as ‘legal highs’) failed to predict the explosion of NPSs which was to occur from 2008 to mid-2016. But this is to just invert historical absurdities which we have just chastised historians for doing with ideas and objects considered to have full positivity.

By a conceptual turn towards history, we move away from essences. Thinking in terms of historically contingent movement. We stop thinking of a singular thing being in the past but being treated differently at one time compared to another, to a position that takes different historical moments as constitutive of different things which come to inform our current conceptualisation of that thing. We are not moving to an ever-greater clarity of a thing; a thing is simply the current position we have achieved based on previous goings-on. To borrow from Rorty (1993 [1989]), we are simply using one language in place of another and there is no ability to make reference to a concrete

object (physical or ideational) which would be capable of determining which was the more accurate language in terms of the common refrain of its ‘accordance with reality’. The fact we are here rather than somewhere else is the product of happenstance much more than any evolutionary drive, perpetuated by progress, historical materialism, Geist, or anything else.

Thus, to be able to conduct a critical and effective history, we need to reject a number of concepts which are at work in traditional history and are productive of particular forms of analysis. Foucault (2002 [1969]: 23-24) identifies these concepts and what they enable in the conduct of traditional history. The notion of *tradition*, makes it possible to think of the dispersion of history in ‘the form of the same’. *Influence* provides its support in the logic of causation. *Development and evolution* work to group events and link them to a shared origin, and finally there is the notion of *spirit*, that invokes a belief in a shared community of meaning which symbolically links disperse events into the singular totality of an apparent history. These notions support the basis of the envisioning of history as continuous, and with their rejection we move to a discontinuous history. Events do not proceed in a procession that is in motion, but discrete instances that are made and as such could be made otherwise.

Critical and effective histories do not adopt traditional modes of interpretation of meaning and understanding within history where ‘timeless elements’<sup>19</sup> in the form of ‘universal ideas,’<sup>20</sup> even a ‘dateless wisdom,’<sup>21</sup> with ‘universal application’.<sup>22</sup> (Skinner, 1969: 4) are believed to exist and sought by the scholar. We are then forced into dropping several notions common in the toolkit of traditional history: tradition; influence; development and evolution; and the notion of ‘spirit’ (Foucault, 2002 [1969]: 23-24). So far, critical and effective histories have been defined primarily in the negative, in terms of what it is not. Now we need to enter new notions that replace the old ones and can now enable this new history. Several of these new notions are discussed below, but first the problem of deriving meaning and understanding through historical analysis needs to be resolved in a way that avoids the historical absurdities outlined above. The true intentions of the author cannot be uncovered solely by

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<sup>19</sup> Merkl, 1967: 3

<sup>20</sup> Bluhm, 1965: 13

<sup>21</sup> Catlin, 1950: x

<sup>22</sup> Hacker, 1954: 783; footnotes cited in Skinner, 1969: 4

reference to the text itself, nor purely by reflection on the ‘social context’ of the time in which it was written. According to Skinner (1969: 49) ‘the appropriate methodology for the history of ideas must be concerned’ with delineating what meanings were available to the author, and tracing their relation to the wider linguistic context as a means of decoding the actual intended meaning. It is with this that the category of discourse is needed.

## §1.2 Discourse

Discourse is about the way we understand the nature of language. A common-sense understanding of language is that it is a way of communicating the world to one another.

‘When Galileo said that the Book of Nature was written in the language of mathematics, he meant that his new reductionist, mathematical vocabulary didn’t just *happen* to work, but they worked *because* that was the way things *really were*. He meant that the vocabulary worked because it fitted the universe as a key fits a lock’ (Rorty, 1982 [1981]: 191-192; emphasis in original).

Under the progressivist paradigm of history, this has meant a belief that as our descriptions of the world have evolved we have been getting closer to describing reality as it truly is. With a critical and effective history, this idea of refinement is unsustainable. However, this raises the question as to the relationship between language and reality. This question underpins the category of discourse. Rather than language emerging from reality, the relationship is actually the other way around; reality emerges through language. With this, discourse then comes to be understood as the systems of meaning made possible in the world, which in turns produces the contingency for what can be said.

The discussion regarding the meaning of understanding of a text in historical analysis indicates the inability to determine meaning from the text itself. Without an ability to settle on a means for determining meaning simply by reference to the text themselves or the contexts in which they are written, we must turn to the *system* of meaning (its discourse). However, the problem of meaning is not a matter of interpretation, it is a fundamental aspect of language, which identifies the overdetermination of objects.

As Ferdinand de Saussure (1959 [1916]: 65) wrote: ‘Some people regard language, when reduced to its elements, as a naming-process only – a list of words, each

corresponding to the thing that it names'. This, Saussure contended, is open to several criticisms. The two of most relevance for us is that it assumes that ideas exist prior to the world, and that the linking of a thing to a name is a simple function. Self-evidence of ideas was rejected along with the essence of things in the previous section, however this was not done in a theoretically thorough manner and so is returned to in this section. The later assumption, that linking names to an object is a simple function (i.e. that a cow is called a cow *because* it is a cow), when interrogated is found to be 'anything but true' (Saussure, 1959 [1916]: 65). It is this breaking of the necessity of the link between a thing and its name which is so important for discourse.

Saussure (1959 [1916]: 65-78) makes the conceptual point that what is linked through language is not a thing and a name, but rather a concept with an associated 'sound-image'. The sound-image, the noise that is made to convey the concept to the receiver of the sound-image, is a *signifier* of the *signified* concept. They share a bi-directional relationship: a signifier invokes the signified, and the signified invokes the signifier. Together in this relationship they form the *sign*; without one another there is merely an uncommunicative noise or a thing that does not exist within that linguistic community. Understood in this way, the name of a thing, a concept's signifier can no longer be taken to be fixed in determination to the concept itself. In other words, the sign is arbitrary. There is no reason why the signifying sound-image is the one linked to a given concept in any instance. To take the hypothetical cow from above, it could have occurred that the sound-image for cow could have been 'sov' for example. This is not to mean that we are free to use sound-images randomly, they are relatively fixed within the linguistic community that understands the sign relationship. Simply there is no *natural* connection between signified and signifier. With this comes the change of signifier (and by turn the change in signified) over time, which is why we run the 'perpetual danger of historical absurdities' when we try to determine meaning by referencing all enunciations which merely share a semantic similarity.

This returns us to the other relevant criticism by Saussure; the assumption that ideas exist before the world. As they postulate: 'if words stood for pre-existing concepts, they would all have exact equivalents in meaning from one language to the next' (1959 [1916]: 116). But because they do not, we are forced to confront the fact that concepts are made for words to stand:

‘The world is for us what is presented through those concepts. That is not to say that our concepts may not change; but when they do, that means that our concept of the world has changed too’ (Winch, 2008 [1990]: 14-15; emphasis added).

This is because words only attain their meanings or content when in relation to other signs within the linguistic framework. This does not emerge from the positive residency of the thing that is signified by the signifier. It is a negative relationship where definition or identification occurs in terms of *not* being something else. A word does not have value unless it is distinct (even if only very subtly so) from other words, otherwise it is simply redundant. Its value will be composed by a combination of dissimilar things for which it can be exchanged, and similar things by which it can be compared. And it is only *within* the linguistic community that those distinctions are made (Saussure, 1959 [1916]: 111-120).

It is the fact that it has to be within a community of shared meaning for it to have any meaning at all which provides language with its appearance of fixedness and means we are not free to use it idiosyncratically, this is the character of contingency that is returned to in the next chapter. Discourse then, provide us with the conceptual tools to understand why meaning cannot be taken as a direct translation from a pre-existing reality. Reality does not pre-exist, it is made in discourse, and discourse changes over time, which in turn implies that reality itself is not fixed but historical also. This fact this is not ‘purely linguistic’, as suggested by those like Fraser and Moore (2011; see *Introduction*), is addressed in Chapter 4. What is most relevant in the current discussion is that discourse makes clear is that (fixed) determination is impossible. There exists for any given thing a multiplicity of determinants, all of which have a non-necessary relationship to that thing. In other words, what we have instead is the overdetermination of objects.

### **§1.3 Origins, Invention, Emergence, and the Descent**

Having now addressed the means of determining meaning and understanding in historical analysis, we need now finally introduce the new notions that replace those notions that underpin progressivist history which we dismissed earlier. These new notions introduce us to the conduct of genealogy. In Foucault’s essay *Nietzsche, Genealogy, History* (1980 [1971]), we are encountered with four different concepts that are relevant to the study of history: *Ursprung* (origin), *Erfindung* (invention),

*Herkunft* (descent), and *Entstehung* (emergence).<sup>23</sup> The first two of these four terms relates to an orientation towards objects in time, whilst the latter two provide orientation to the techniques of tracing. These notions mark the transition from archaeology to genealogy within Foucault's approach to history, with Foucault's genealogical method built on the foundations of the archaeology (Dreyfus & Rabinow, 1983: 106). With the latter three of these notions, we have the final supports we need here for the conducting of our *critical* history.

The notion of origin has been introduced above, its status as a support for traditional history identified, and duly dismissed. The pursuit of origins in traditional history:

‘is an attempt to capture the exact essence of things, their purest possibilities, and their carefully protected *identities*, because this search assumes the existence of immobile forms that precede the external world of accident and succession. This search is directed to ‘that which is already there,’ the image of a primordial truth fully adequate to its nature, and it necessitates the removal of every mask to ultimately disclose an original identity. However, if the genealogist refuses to extend his faith in metaphysics, if he listens to a history, he finds that there is ‘something altogether different’ behind things: not a timeless and essential secret, but the secret that they have no essence or that their essence was fabricated in a piecemeal fashion from alien forms’ (Foucault, 1980 [1971]: 142; emphasis added).

It is against the notion of origin that the notion of invention (*Erfindung*) gains its weight. Invention acts as our constant reminder that ideas and objects are not pre-existing essences waiting to be discovered, but rather that they are made. Not necessarily by intention or by volition, perhaps even by accident, but by the hand of ‘man’ nonetheless.

If origin (*Ursprung*) was to infer a singularity to the beginning of a history, then descent (*Herkunft*) is to fracture it. The word *Herkunft* differs from *Ursprung* in that it also has connotations of ‘stock’, implying a lineage or hereditary derivation. The use of *Herkunft* would usually imply it to the study of race or social type. However, Foucault does not take this to imply a tracing of the commonalities through a lineage that make all points an identity, but rather how ‘the subtle, singular, and subindividual marks’ comes to intersect in ways that produce a surface of commonality. It is the

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<sup>23</sup> *Ursprung*, *Herkunft*, and *Entstehung*, all translate to origin, but the particularities inferred by their slight variations means the given translations are more useful for their conceptual utility. Foucault takes the terms from Nietzsche, hence the use of German originals from a French article.



differentiation of these parts, and their assemblage in configurations under power, that the critical historian is concerned with (Foucault, 1980 [1971]: 146). It is these heterogeneous parts of what was originally considered as consistent with itself that unpicks the tensions of the identities of objects and ideas, raising the question as to why those parts in those formations, and how are they different to what came before and what follows.

With the notion of invention now within our conceptual supports, the idea of beginnings being something to be discovered no longer follows, what is needed is the notion that ideas, objects, sentiments and the like ‘emerge’. *Entstehung* (emergence) demarcates a space into which the heterogeneous elements that are identified come into the constellation that they do to become considered a distinct object. Rather than a space where one formation is replaced by the overthrow of another (one concept replacing another) through the open conflict of a dominated and dominating, but rather an entering of forces that produce something anew. Things do not exist, waiting to be discovered or to be fully realised, rather they are brought into being.



In this section, we have situated the theoretical basis for the overdetermination of objects. The category of discourse has brought us to a stage of being ‘a card-carrying anti-foundationalist’ (Fish, 1989: 347). Interrogation of history has caused us to reject a whole range of notions (tradition; influence; development and evolution; and the notion of ‘spirit’) required for the conduct of traditional history. In their place, new notions (origin; invention; descent; and emergence) make possible the conduct of a genealogy. Genealogy takes to task the taken for granted perspectives of the world, and what be recorded as the official account for a things status of being, challenging those given histories (Bull, 2008: 13). This provides us with the methodological considerations for the conduct of a genealogy of cognition enhancers in UK policy-making.

## **§2. The Overdetermination of Cognition Enhancers**

In this section the research literature on cognition enhancers is outlined. Through this, I suggest that cognition enhancers are not fixed with reference to either the properties of cognition enhancers, nor determined in relation to something external. What

becomes apparent in the scientific research literature is how cognition enhancers are more something of a hope for potential future substances. To demonstrate the lack of a fixity of cognition enhancers, I will begin with a definition of cognition enhancers, from which I interrogate the basis of their classification. Cognition enhancers are drugs which:

‘improve cognitive functions such as attentional processes, learning and memory. The term is used broadly for drugs that enhance cognitive functions in healthy subjects and/or attenuate the cognitive symptoms of neuropsychiatric and neurodegenerative disorders’ (Sarter, 2006: 602).

Whilst there are various definitions, most definitions would share a family resemblance to this one. This definition defines cognition enhancers as a groups of substances that result in a particular outcome when used by given types of people. Of note, and as will become clear in the discussion of the neuroethical-philosophical debate (Chapter 4), the discourse on cognition enhancers is primarily concerned with their use by healthy individuals. This is because the concern is over the use of enhancements, rather than medicines. For this reason, the discourse outlined over these two chapters will be not concerned with cognition enhancement for ‘unhealthy’ individuals.

## **§2.1. Internal Determination**

From the definition above, it would appear that cognition enhancers would be any drug that improves the cognitive functioning of any given (healthy) individual. In this subsection I will suggest that this criterion is rather more complicated than the definition would imply. The suggestion that these drugs improve cognition on a global level is inaccurate; rather they effect only forms of mental activity, and there is no shared mechanism of effect. Nor can we assert that even the current generation of putative cognition enhancers reaches the threshold to unequivocally be within the classification. In other words, from the definition above that would assert that that the identity of cognition enhancers is related to a property of the drugs themselves. However, when interrogated results in an empty classification.

For a frame of reference, the most commonly known putative cognition enhancers are Ritalin, Adderall, Modafinil and Aricept, medical drugs that were originally developed for the treatment of neurological conditions such as Alzheimer’s, ADHD, and narcolepsy. Whilst these drugs are the most well-known cognition enhancers,

there is a wide range of pharmaceutical drugs which could be considered as cognition enhancers, and the Thomson Reuters Pharma database lists 1,249 drugs as nootropic agents or cognition enhancers (Froestl, Muhs & Pfeifer, 2014: 961).

Within the wider literature on cognition enhancers they are often discussed as if they are already effective and safe (e.g. Bostrom & Sandberg, 2009), ‘however, “performance enhancement” properties, along with safety issues, still remain disputed’ (Dubljević, 2012: 30). While there is much evidence for support of the efficacy of current cognition enhancers, there is also evidence to the contrary (c.f. Lynch, Palmer & Gall, 2011; Dubljević, 2013: 26) and there is some concern that in some instances cognition enhancers can actually be detrimental to cognitive processes (Outram & Racine, 2011: 324). Furthermore, there are still ‘sizable gaps [which] exist in our current understanding of the effects, both positive and negative, of neuropharmaceuticals on healthy individuals’ (Racine & Forlini, 2009: 469). In the face of an absence of proof that these drugs achieve the great improvements that are often claimed in some parts of the literature, Racine and Forlini argue that:

‘to avoid making promises through scientific and ethical terminology, a more neutral term (e.g., ‘non-medical use of prescription drugs’) could be used by the community of interested stakeholders to convey the state of current evidence’ (2009: 469).

The term cognition enhancer is possibly unhelpful itself. It ‘is debateable in so far as it implies efficacy that has not been established’ (Racine & Forlini, 2009: 469) and it also implies, amongst other things, that the drugs target cognition itself, but in practice they only alter the chemicals in the brain that modulate cognition. Doing so through different mechanisms of effect:

‘These chemicals, called neurotransmitters, relay, amplify, or influence signals sent between neurons in the brain. They are released from a neuron into the synaptic cleft (the space between two adjacent neurons), and bind to receptors on the membrane of an adjacent neuron. Drugs can modulate these signals in different ways: they can, for instance, mimic or boost the release of neurotransmitters, increasing binding to post-synaptic receptors and thereby amplifying of the neurotransmitter. Drugs can also decrease the ability of the neurotransmitter to bind to the post-synaptic membrane, reducing its effect. Other drugs block the function of enzymes that break down neurotransmitters, thereby increasing concentration of the latter on the synaptic cleft’ (Housden, Morein-Zamir & Sahakain, 2011: 114).

Different cognition enhancers affect different systems in the brain, meaning they tend to only produce improvements for particular modalities of cognition. There is no drug that boosts global cognition, as depicted in films such as *Limitless* (2011) or *Lucy* (2014). Froestl, Muhs, and Pfeifer (2014: 962-963) list 42 receptors that have been identified as targets for the development of cognition enhancers, but drugs interacting with receptors is only one of the mechanisms by which cognition enhancers function, and the authors have developed a classification of cognition enhancers with 18 further categories, all of which have recent or current research.

Therefore, when we talk about cognition enhancement, we are not referring to any one effect, but a potential range of effects. Cognition enhancers are not fixed with reference to the type of cognition that they effect, nor the mechanisms by which they function on modalities of mentation. This then turns us to those drugs which are considered to be cognition enhancers, perhaps something could be deemed to belong among them that determines them as cognition enhancers. Unfortunately, this does not bear fruitful results either.

Part of the problem is the inconsistency of results from experiments on the effect of cognition enhancers. One of the touchstone pieces of research (with over 200 citations) in evidencing the efficacy of cognition enhancers is a 2003 paper by Turner and colleagues. They conducted a blind-controlled study with 60 healthy male adults, with volunteers receiving a placebo or a dose of modafinil of either 100mg or 200mg. A series of test paradigms was administered, the results of which showed an improvement in short-term memory capacity, visuospatial learning and memory, and attention (p.261), with no statistically significant improvement between low and high doses of modafinil apart from stop-signal reaction time, where a higher dose did result in a statistically significant improvement. Although Turner et al. (2003) do support the benefits of modafinil for ADHD over general cognitive enhancement, this, along with studies showing similar results (Elliott et al., 1997), is proof enough of the potential of cognition enhancers for many (Farah et al., 2004; Greely et al., 2008; de Jongh, et al., 2008).

However, a less referred to piece of research that argues otherwise is that by Randall and colleagues (2005a; 2005b). This research followed two previous studies by Randall et al., the first of which was a study with (n=30) young (19-23) men and

women where modafinil use indicated emotive rather than cognitive effects (Randall et al., 2003). Another study with (n=45) middle-aged (50-67) men and women indicated no emotional and minimal cognitive effect (Randall et al., 2004). As a result Randall et al. (2005a) decided to do further tests, conducting some of the tests used in their previous studies, plus the same tests that showed positive results for Turner et al.'s study and increasing the sample population to match (n=60). They found that modafinil did improve scores in some tests, but 'only in very specific, relatively simple tasks' (p.179) which were not replicated in their previous studies. Randall et al. were clear in their assessment in claiming that 'these limited cognitive effects are insufficient for it to be considered as a cognitive enhancer' (p.179). They were to subsequently combine the results of their studies on young adults (n=89) in a retrospective analysis (2005b). They considered the variance between certain tests as being correlated to IQ, with people with lower IQ having larger performance improvements than those with higher IQs, inferring that modafinil improvement to performance is not detectable for those with a higher baseline of performance. As Forlini, et al. (2013: 123) observe, 'the terms "cognitive enhancement" and "cognitive enhancers" imply the very efficacy that research still needs to confirm or refute'. The data on the efficacy of modafinil in healthy human subjects as the exemplar cognitive enhancer is at best equivocal (Smith & Farah, 2011; Outram & Racine, 2011: 324). This leads some to consider the existence of cognition enhancers to be a myth (Zohny, 2015).

What becomes clear through this discussion of the scientific research literature is that what constitutes cognition enhancers is not fixed with reference to what the drugs do, nor how they function when used. This means that understanding what cognition enhancers are cannot be determined in relation to something internal to the cognition enhancers themselves. However, when cognition enhancers were introduced within the Government's Office for Science and Technology's Foresight project (2005b: 3), they were explicitly seen as a 'new breed of drugs'. If this 'new breed' cannot be determined by properties belonging to themselves, then it would be expected for there to be an external determination. Something that determines them as cognition enhancers in their use, something that distinguishes them from medical and recreational drugs. This brings me to the research literature on the use of cognition enhancers.

## §2.2. External Determination

The other area of scientific research on cognition enhancers focuses not on the internal properties of cognition enhancers, but on the external of them; their use by healthy individuals. Here I must re-assert a clarification, whilst the definition by Sarter did include the use of these drugs by people with ‘neuropsychiatric and neurodegenerative disorders’, it became clear through the use-based research literature reviewed in this section, the ‘treatment vs. enhancement’ debate discussed in Chapter 4, and the policy research focus of this thesis, that with cognition enhancers the concern is with their use by healthy individuals. Sarter’s definition is not wrong in the strict sense; rather, it is representative of the polysemy that exists around cognition enhancers, which is indicative of the overdetermination of cognition enhancers.

The research literature on the use of cognition enhancers can be broadly separated into three areas of focus: prevalence of use, effects, and motivations for use. Prevalence has received the most attention, largely because effects and motivations have been assumed. Within the literature on cognition enhancers there is a tendency for prevalence of use to be stated as if it is already widespread (Chatterjee, 2006; Sahakian & Morein-Zamir, 2007; Greely et al., 2008; Cakic, 2009). The evidence for such claims is usually lacking, ‘often cited in support is a methodologically debatable poll published in *Nature*’ (Forlini et al., 2013: 124; Maher, 2008). In more recent years, more methodologically rigorous surveys have been conducted. Some have suggested that prevalence amongst universities may be above 30% (Low & Gendaszek, 2002: 286; DeSantis, Webb & Noar, 2008), others suggest it to be much lower (Smith & Farah, 2011: 719; 723). These studies have been primarily conducted within the US (Ragan, Bard & Singh, 2013: 589).

Most studies have focused on the three most commonly known cognition enhancers, Ritalin, Adderall, and Modafinil. The list of medical drugs that are considered to be nootropic or cognition enhancers far exceeds this (Froestl, Muhs & Pfeifer, 2014: 961), and other studies (Mache et al., 2012) have included different pharmaceuticals such as  $\beta$ -blocker’s (Beloc), Fluoxetine (Prozac), and Piracetam (Nootropil), and nonmedical drugs such as phytomedicine (plants/herbs), cannabis, and caffeine pills to increase accuracy of prevalence data. In trying to ascertain the full extent of cognitive enhancer use, some researchers have included traditionally recreational

substances (Hildt, Lieb & Franke, 2014), including the use of drugs such as heroin (Eickenhorst et al., 2012), LSD (Hupli, Didžiokaitė & Ydema, 2016: 8), DMT, ketamine, *inter alia* (Singh, Bard & Jackson, 2014). There is also some anecdotal evidence of NPSs being used similarly (Regan, Bard & Singh, 2013: 589). This approach leads to an ever-expanding understanding of what is included as enhancement; does the use of recreational drug for enjoyment count as ‘enhancement’? I do not want to foreclose this as a possibility, especially as I see potential political utility in understanding the use of drugs as enhancement. However, the expansive definition in this sense loses the specificity of the phenomena that these studies seek to understand.

These substances constitute a wide array of different substances in terms of their effects on the body and consciousness (Ragan, Bard & Singh, 2013: 589). This is unsurprising given that what constitutes a cognition enhancer is not determined from something internal to the drugs themselves. The vast range of substances and names makes the production of an exhaustive list a futile task. Such a list would also very likely be of limited utility because it would only be a descriptive list, providing no rationale as to what should and should not be included as a cognition enhancer, which is particularly important given that a large portion of hope surrounding the potential of future cognition enhancers (Heinz et al., 2012: 372; Hall, 2003).

Researchers have been using increasingly long lists to measure the prevalence of cognition enhancer use, but they do not deal methodologically with how they separate the use of recreational drugs that are used for enhancement purposes from those used for recreational purposes. This is most notable in Hildt, Lieb, and Franke’s (2014) research when they discussed findings from one student respondent who used amphetamines to improve their musical performance, arguing ‘users consumed stimulants to pursue their individual projects outside the academic sphere. This aspect sheds new light on CE [cognition enhancement]’ (p.7). The relationship between recreational drug use and music has long been documented (Becker, 1997 [1963]; Shapiro, 1999). I would suggest that here we have a case of a user using a recreational drug recreationally, rather than as an enhancement in the distinct categorisation or identity of cognition enhancers. This slippage is an easy one, if a drug is for ‘enhancement’ or ‘recreation’ is in part determined by the user. However, we must not risk trying to impute meaning that the user did not intend. Whilst the user might

use a recreational drug to ‘enhance’ their enjoyment of music, this could be expanded to any recreational drug as a means of ‘enhancing’ recreation. This might be an idiosyncratic distinction on the part of the user (who’s own understanding *is* important), but it would remain a recreational use, and I suspect the user would also largely classify their use as part of a wider collection of means of recreation.

This recreational to enhancement movement is also mimicked in research considering typically enhancement drugs. Schleim (2010) has argued that prevalence estimates of cognition enhancer use that are cited in papers such as McCabe et al. (2005), Farah et al. (2004), and Babcock and Byrne (2000) are likely too high because they often conflate the use of medical stimulant drugs for recreational reasons with those of cognitive enhancement, i.e. assuming the use of Ritalin is for cognitive enhancement when it might be for the purpose of staying up later to party, a recreational use by common understanding. These studies fail to differentiate purpose of use.

A similar but opposite issue occurs when dealing with medicines used for cognitive enhancement. When some researchers have examined the extent to which medical drugs are used as cognition enhancers, they have excluded cases in which use was for enhancement rather than medicinal. In studies into the use of attention deficit hyperactivity disorder (ADHD) medications such as Ritalin and Adderall as cognition enhancers, it is not uncommon for researchers to screen users for ADHD (sometimes undiagnosed) and exclude them from their studies (cf. DeSantis, Webb & Noar, 2008; Dietz et al., 2013; Franke et al., 2011; Singh, Bard & Jackson, 2014). Issues arise here because some students with ADHD “misuse” their medication for enhancement rather than medicinal purposes (Benson et al., 2015). Some students also feign symptoms to gain a prescription (Petersen, Nørgaard & Traulsen, 2015b). An interesting dynamic is also that some students use ADHD medications to “self-medicate” (DeSantis, Webb & Moar, 2008: 318; Peterkin et al., 2011). This is further complicated because experiences can be similar between neurologically typical and atypical users (Hupli, Didžiokaitė & Ydema, 2016: 3).

This research suggests that some cases of cognition enhancement are excluded, while sometimes cases of other activities are included in the prevalence studies. The fact that recreational uses are often included as enhancement, and enhancement often excluded as medical, is not a result of incorrect understanding amongst researchers



conducting research into the use of cognition enhancers, but rather of cognition enhancers not being determined by the properties of the drug themselves. Nor are they determinable in relation to what they are relative to other drugs as they are often considered to overlap. Perhaps, then, cognition enhancers can be fixed in relation to the motivations of the users and the effects, both individual and social, of using them. But this also fails to find a singular determinant. Quantitative studies have found a range of motivations varying from the expected ('to be motivated') to the less obvious ('to lose weight') (Teter et al., 2006; Weyandt et al., 2009) and whilst there is still a dearth of in-depth qualitative research with users of cognition enhancers, what little that has been done demonstrates further diversity in motivations, experiences and the effect that use has (DeSantis, Webb & Moar, 2008; DeSantis & Hane, 2010; Partridge et al., 2013; Vrecko, 2013; Petersen, Nørgaard & Traulsen, 2015a; 2015b; Hupli, Didžiokaitė & Ydema, 2016; Robitaille & Collin, 2016).

What researchers have done without necessarily being aware of it, is to participate within a negotiation of what constitutes cognition enhancers. Without an ability to fall back on something internal to the drugs themselves, researchers have looked to external determinants assumed to be manifest in their use. However, this in itself has resulted in a multiplication of the substances considered to be cognition, the effects they produce, who does and does not use them, and their motivations for doing so. Attempts to fix determination result in either an empty category or one so expansive as to be totalising; there is either nothing that unequivocally can be classified as a cognition enhancer, or it is allowed to encapsulate activities that are closer to medical or recreational use, and therefore loses its specificity; in both cases the signifier of 'cognition enhancer' becomes redundant. Just as occurred with a focus towards the internal resulted in an inability to fix a determination of cognition enhancers, so too in a search for external determination. Cognition enhancers are, in other words, overdetermined; there is no singularly identifying determinant of cognition enhancers.

## **Summary**

This chapter has made the first move required for asserting the centrality of identity to objects that constitute the third element this thesis, and argues it is constitutive of the policy process. The essentialism of objects and ideas has been abandoned in face of a critique through the category of discourse and the analysis of history leading to

genealogy. The category of discourse provides us with the conceptual tools for understanding why meaning cannot be taken as a direct translation from a pre-existing reality. Reality does not pre-exist, it is made in discourse. Discourse changes over time, which in turn implies that reality itself is not fixed but also historical. Rather than objects and ideas having fixed determination, they are overdetermined. Overdetermination means that there is a multiplicity of meaning (a polysemy) to a given object or idea, ‘they lack an ultimate literality which would reduce them to [an essence]’ (Laclau & Mouffe, 2014 [2001]: 84). It is fundamentally impossible to burrow down to find an essence at its centre or core which provides that object or idea its identity as itself.

Cognition enhancers, as the entity that constitutes the object in the tripartite assemblage of social policy that this thesis presents as its case study, has been interrogated to demonstrate its overdetermination. The search for fixed internal and external determination results in either an empty category or one so expansive as to be totalising – there is either nothing that unequivocally can be classified as a cognition enhancer, or it is allowed to encapsulate activities that are closer to medical or recreational use, and therefore loses its specificity. In both cases the signifier ‘cognition enhancer’ becomes redundant. This is not to argue that cognition enhancers (or, for that matter, any object or idea) are nothing; far from it, they are ‘promising or threatening to drastically change the lives of all citizens’ (Dubljević, 2012: 29). There is a specificity to cognition enhancers, however, and rather than their specificity resulting from fixed determination, it emerges through a production of their contingency. This contingency is based in the assumption that these drugs do not repair a disorder but rather enhance an already ‘healthy’ subject to an idealised subject, underpinned by assumptions of a ‘normal’ subject that is white, heteromale, able-bodied, etc. This presumption exists in the hinterlands (Law, 2008 [2004]: 28-29) that constitute these drugs as ‘cognition enhancers’.

## 4. Identity as Contingency of Objects

### Introduction

Having now developed the category of discourse to account for the antifoundationalist nature of objects, we now need to account for why it is that we are not able to construct reality freely. This concern is because it is common for some, once the antifoundational character of reality is asserted, to argue that this implies some sort of nihilism; that without foundations there is no basis on which to make judgements of value. Leaving aside for now that all judgements of absolute value are in practice judgements of relative value (Wittgenstein, 1965 [1929]), this fails to consider that discourse is not just an antifoundationalist critique, but also an analysis of construction; the construction of identity. This is the matter of contingency which is the result of the articulations that provides overdetermined objects with their temporarily stable formations as a given identity. Identity is the product of ‘fixing’ an object, or at least making the appearance of a fixedness.

Discourse is not merely another term for language, it is a concept for understanding the systems of meaning which are productive of reality. This means that discourse cannot be separated from the questions of power and knowledge, which in turn cannot be separated from one another but are taken as always being implicated within each other. Discourse, then, is about the assemblage of knowledge organised through power relations in a collection that Foucault termed an archive. How the archive achieves a particular sedimentation is a matter of hegemony, which accounts for one contingent formation over another. The chapter then turns to the empirical question of how documents were gathered for the production of the genealogy presented in Part III; I refer to this as my archive, although the concept of the archive is much more expansive than any data gathering exercise could achieve.

After having considered these theoretical and methodological questions that arise on the theorising of contingency, the chapter turns to an analysis of the contingency of cognition enhancers. Here I look at how, despite the overdetermination of cognition enhancers they manage to raise significant bioethical and philosophical concerns around issues of their implications around the borders between medicine, treatment, and enhancement (§2.1.1); how they could be used to the benefit or detriment of equality and fairness within society (§2.1.2); raise concerns for our authenticity of self

and autonomy of choice (§2.1.3); and if by actively choosing to ‘enhance’ we are playing with human nature (§2.1.4). Most importantly for understanding their contingency, however, is how all these debates centre around normative assumptions of human nature that exists in the hinterland of cognition enhancers (§2.2). The chapter then moves to a consideration of the policy and control discussions in the academic discourse on cognition enhancers, arguing that their specificity relates to the specificity of the contingent identity of cognition enhancers. This points towards the relation of identity of objects in policy-making, finalising the theoretical supports required for the analysis presented in Part III.

## **§1. Contingency**

### **§1.1 Power and Knowledge**

In the previous chapter, discourse was presented as being in relation to language, which if taken by itself may give the appearance as if language and discourse was one in the same. The analysis of language found that language was lacking fixed determination. It is this assumption that discourse is almost co-extensive with language that results in some scholars to suggest that those who employ the category of discourse imply reality is free-floating. However, language is too blunt an instrument for analysis. Whilst language itself is finite and governed by finite rules of formation, it covers far too broad a range of infinite potential uses and performances (Foucault, 2002 [1969]: 30). It needs refinement for the study of the history of ideas, and here we reach the specificity of the category of discourse and in particular the question of contingency.

When critics such as Fraser & Moore imply that discourse is purely linguistic (2011: 3-4) and therefore discourse is to suggest that *anyone* can change reality merely by changing how they talk about it (which is clearly absurd), they fail to acknowledge that language is a shared practice. It only has meaning within its linguistic community. If one wishes to use a language of their own creation or outside the conventions of the community in which they share, they become idiosyncratic and speak nonsense. Discourse should not be understood as limited to speech, but as anything that is capable of being communication, such as images and gestures. Indeed, ‘since all social practices entail meaning, all practices have a discursive aspect. So discourse enters into and influences all social practices’ (Hall, 1992: 201-202). Discourse is not merely

linguistic, nor can it be altered simply by volition, although this does not mean that a community cannot decide to intentionally change a discourse.

Discourse is a logic for speaking of the world. These logics are shared among those who employ a given discourse, in turn providing a shared way of making a topic knowable. It is this logic that results in multiple people engaging to create the same new ideas ‘even if the authors were unaware of each other’s existence’ (Foucault, 2002 [1969]: 32). Discourse is in a sense, *sui generis*.

‘A discourse is a group of statements which provide a language for talking about – i.e. a way of representing – a particular kind of knowledge about a topic. When statements about a topic are made within a particular discourse, the discourse makes it possible to construct the topic in a certain way. It also limits the other ways in which the topic can be constructed’ (Hall, 1992: 201).

What we need is to be able to ask, then, is ‘how is it that one particular statement appeared rather than another?’ (Foucault, 2002 [1969]: 30). This requires a contextualisation of the language games at play in a given context: who is speaking, what is their profession and what are they representing; who are they speaking to, colleagues, peers, relatives, knowledgeable listeners; what is available to be said, what specific part of their expertise, knowledge or experience are they drawing on; what does this performance produce, does it challenge, build, reproduce, advance; and so on. In other words, with the category of discourse we are referring to a system of meaning, a system by which to derive meaning and understanding in and of the world, and the ideas and objects and subjects that populate it.

Therefore we cannot ignore the question of power in discourse. As Foucault demonstrated in *Discipline and Punish*, when something is made knowable, it becomes made something that can be manageable and enacted up: ‘knowledge is not made for understanding; it is made for cutting’ (Foucault, 1980 [1971]: 154). When it comes to objects like drugs and people who use drugs, they become things for which legitimate intervention becomes known and rationalised within the discourse of those objects: ‘ideas, cultures, and histories cannot seriously be understood or studied without their force, or more precisely their configurations of power, also being studied’ (Said, 1980 [1978]: 13). Discourse links power and knowledge (Foucault, 1991 [1975]: 27; 1998 [1976]: 100).

‘The analysis of the discursive field is orientated in a quite different way; we must grasp the statement in the exact specificity of its occurrence; determine its conditions of existence, fix at least its limits, establish its correlations with other statements that may be connected with it, and show what other forms of statement it excludes’ (Foucault, 2002 [1969]: 30-31).

Discourse, or a discursive field or formation, is how knowledge is made in the world. It articulates how we can know about a given thing and the proper ways of communicating this knowledge. In other words, discourse is as much about what can be said (and inversely what cannot be said), what does not need to be said (and that which does), and the rules that govern these that exist at a level of the social rather than inherent within the rules of grammar or based in a final grounding of truth. Discourse is a concern with the ‘conditions of possibility’ (Laclau, 1994: 2), not simply that of what is said.

Power was radically altered under the analysis of Foucault. His contribution is surprising given that he was to claim that:

‘The question of power in itself does not interest me. I did speak often about this question of power because the *given political analysis* of the phenomenon of power could not be properly addressed from the fine and small appearances I wanted to recall’ (Foucault, 1996 [1983]: 361; emphasis added).

This ‘given political analysis’ sees power as something that has a centre, emanating out from this point which is its source (Foucault, 2000 [c1997]: 88). Power would thus be considered as something one has or holds; property (Deleuze, 2006 [1986]: 22). Foucault was to effectively de-centre power, to no longer view power as something to be unleashed by one on another, but for it to be understood as a ‘relational force’ (Deleuze, 2006 [1986]: 24; 59). This is significant because it is through discourse that objects and subjects are brought into relation to one another. Discursive articulation attempts to position objects through chains of equivalence and difference to other objects. The decentring of power means we cannot place the occurrence of events as being the result of power enacted by individuals or of grand narratives or spirit of the times, but as occurrences made manifest through assemblages of contingencies that made possible the particular specificity of the given event.

It is this assemblage of contingencies that attests to the centrality of identity. Here I draw heavily on Ernesto Laclau and Chantal Mouffe (2014 [2001]: 79-131). If an object is without a fixed determination between its signifier and signified, then the

production of the determining relationship must be contingent on that linguistic community that has come to the current moment of the sign, and this contingent articulation is the hegemonic formation of an identity. If the identity of an object does not exist within the object itself, and therefore must be made, it can only be relational and negative. As such, any articulatory practice which seeks to identify an object can only do so by inferring by what other objects it shares an identity or by contrasting it with others. In this, the identity of an object becomes fixed within a system of relations to other objects with the meaning system. At times, identity is opened to challenge or becomes largely sedimented and stable. In either case, an identity is always the contingency of an object. This is the other side to overdetermination within the category of discourse.

## **§1.2 The Archive**

Identity is the contingency of objects formed within discursive formations. The analysis of discourse in this and the previous chapter has been largely restricted to theoretical abstraction. In this subsection I now turn to the question of how to determine the relationships within discourses that produce certain contingencies over others. Discourse gives us the conceptual tools for determining meaning and understanding in critical and effective histories. But this still leaves the question of the material of analysis unfinished:

‘It is crucial to understand that in Foucault’s account discursive practices are not the same thing as speech acts or linguistic statements. Discursive practices are the material conditions that define what counts as meaningful statements’ (Barad, 2007: 63).

This material (not same material to which Barad refers), is that of the statement, which can no longer be taken as a continuation of a historical progression, birthed as a result of the origin that set it in motion. It is a discrete discontinuous event, ‘a statement is always an event that neither the language (*langue*) nor the meaning can quite exhaust’ (Foucault, 2002 [1969]: 31). The task of the critical and effective historian is to gather statements to determine the relationship of these statements, their rules of formulation. It requires an archive.

An archive is a collection of configurations and knowledges which together form a body of a discursive formation. An archive is held together through the relations of ‘a family of ideas and a unifying set of values proven together to be effective’ (Said,

1985: 41-42 quoted in Hall, 1992: 208). The analysis of cognition enhancers presented in this and the previous chapter can be understood as an archive on cognition enhancers by identifying a collection of different sources – scientific, bioethical-philosophical, and policy discourses – that together produce a formation of cognition enhancers. A statement is not a sentence, we cannot understand a discourse simply by considering grammatical rules of formation. As Foucault (2002 [1969]: 82) points out ‘a genealogical tree, an accounts book, and the calculations of a trade balance’ are all statements or collections of statements, but contain few or no sentences.

This raises the question of the matter of the determination for the inclusion and exclusion of statements. Which statements are relevant and which are not? This is a question of what documents can be considered as constitutive of the discourse one wishes to study. However, we are once again faced with the primacy of the text or context:

‘The frontiers of a book are never clear-cut: beyond the title, the first lines, and the last full stop, beyond its internal configuration and its autonomous form, it is caught up in the system of references to other books, other texts, other sentences: it is a node within a network. And this network of references is not the same in the case of mathematical treaties, a textual commentary, a historical account, and an episode in a novel cycle; the unity of the book, even in the sense of a group of relations, cannot be regarded as identical in each case’ (Foucault, 2002 [1969]: 25-26)

This touches on what Foucault (2002 [1969]: 24-25) refers to as the frontiers of a document. A document is in a relation to other documents; it is more than simply the front cover to the back page. In this system of relations to other texts, and its production for a purpose to contribute within these relations to convey an intention of the author, the document is asked to act. In the case of social policy documents, this is complicated by multiple authors, often hidden behind organisational titles. The question of multiple authors is returned to later. Understanding documents as being asked to act complements an understanding of policy as an assemblage and enactment. Policy documents *do* policy, and they are one part of the assemblage of that doing. Here I draw on the idea of documents as ‘material semiotic actors’ (Hunter, 2008).

For Shona Hunter:

‘in social policy there is an ongoing tendency to underplay the process of *doing* policy documents, their *becoming*. This in turn can lead to



analysis which underestimates what those documents actually do, but also what they might do' (2008: 508; emphasis in original).

Documents are the result of the multiple practices, material, psychological, social and cultural. They do the work of connecting dispersed elements into an apparent whole, coherent and stable – 'apparent' only because their limits extend beyond their physical frontiers. Policy documents define the problems that they come to encounter, 'they judge, form networks, communicate and work performatively, generating symbolic attachment and identity investments as they travel across time and space' (Hunter, 2008: 508). Marking an area which is to be considered of relevance and how it is so. In a sense, then, documents speak.

But for whom do they speak? This problem already exists when there is only a sole author. But as Foucault and Skinner engage in their own different ways, how do we understand that sole author? Do we take all their published works? What about aborted drafts (Foucault, 2002 [1969]: 22-23), or what if they have changed their opinions over time, and what they genuinely intended in previous work has now been discarded and they have moved on (Skinner, 1969: 20-21)? The problems of the author are magnified in a case study like the one presented in Part III where the documents involved, especially those policy documents of principle concern, have no sole author but are the product of committees, having gone through evaluation or comments by oversight or stakeholder groups, edited by writers, and potentially ghost written. The intentions of the author trying to convey a meaning or contribute in a specific manner become ever more opaque in these ways. We are still left to make the interpretation through a lens of the context as a 'ultimate framework', but claims of whose intentions they represent and to what ends can only be made with caution.

Within this project we have the opportunity to include an additional set of documents; interviews conducted for the sole purpose of this research project. With our chosen case study of cognition enhancers we are able to gain access to those who developed documents and appreciate the processes through which the documents were made. In Part III, we will come across how the production of the policy documents became objects of truth; they defined a reality that needed to be addressed and gave support for certain futures to become possible. Heavily implicit in this is that we are not constrained from thinking only of policy documents in this way, the category of discourse means we should bear in mind how external documents (research articles,

comment papers, presentations, minutes, newspaper stories, etc.) all did their part in the genealogy of cognition enhancers. They produced and re-produced one another. Given that the archive is the collection of statements from which the relation between statements within the discursive formation can be traced, consideration is required over how it is determined which statements are of relevance. How to form an archive for the purposes of analysis of a discursive formation is turned to below.

### ***§1.2.1 Producing an Archive***

With discourse, there is always the possibility of statements made in relation to other statements outside; a node in another network with that network in turn acting back on the node and effecting the initial network. With all the nodes of the subsequent network being nodes in a further network, and so on until the totality is reached. To be able to map an archive so fully would be to do as Borge's 'cartographers of the Empire' and for it become a 'simulacra' (Baudrillard, 2004 [1981]: 1). Of course, empirically we are unable to do this, but such a study still 'requires patience and a knowledge of details and it depends on a vast accumulation of source material' (Foucault, 1980 [1971]: 140).

The ever-regressing networks cannot be identified to the  $n^{\text{th}}$  degree. This is what I understand by John Law's use of the term 'hinterland' (2008 [2004]: 28-29). What Law provides us with in this term is the realisation that there is always practices lying beyond what is visible or known but are required to make the initial phenomena possible. This is argued with relation to the normative body as a hinterland without which the specificity of cognition enhancers as an object and their response is not possible in the analysis of the contingent identity of cognition enhancers. An archive is too expansive for it to be possible to complete. My archive is simply a collection of documents used as an evidence base, with awareness that there exists hinterlands that cannot be known prior to analysis.

The available history on cognition enhancers is rather limited. It is pieced together through a very limited number of documents; project reports, parliamentary committee reports, amendment papers, academic journal articles, and websites. Events which follow one another are provided little explanation, why one route over another is left untouched. The desire is thus to develop a more 'critical' or 'effective' history (Dean, 1997 [1994]), in the form a genealogy on a relatively unknown area of

policy-making. It is my intention to reconstruct this history, but in a form that better articulates the centrality of identity in the interplay of the imagined citizens, policy-makers, and objects in policy formation. To be able to achieve this I need to be able to produce the archive on which the act of tracing and the specifying of the relation of statements to other statements can be made. The archive is a collection of statements that in their rules of formation are discursive. I am here allowing a slippage in the use of the term 'archive' between its methodological proper approach and its more common use. In this section I will outline the processes and considerations that informed the way I built my archive of the case study of cognition enhancers in UK social policy.

The principle method of the archive is the selection of documents. I will return to the question of documents below, but first I want to consider a possibility that becomes available in cases like mine where the history to be studied is relatively recent and those involved (for the most part) are still alive. The archive of documents can include interviews conducted with those involved. In essence we open up the possibility to gain access to the archives statements that have not left their imprint on documents. Including interviews raises a further set of methodological considerations, which were discussed in Chapter 2. Interviews, in the form of transcripts (in this case), sit at a different level to documents that are selected due to their properties of being the 'natural' product of the period of history to which we are investigating.

Beginning with the objects given to us, making no assumptions (Foucault, 2002 [1969]: 29), we can start to build up the evidence base by tracing out each document's descent. The initial stage of inclusion was the apparently self-evident documents of the history, the reports that were produced directly as a result of the activities: the Foresight *Drugs Futures, 2025?* Reports (Foresight, 2005a; b; c; d; e); the Foresight *State of Science* reviews (ibid, 2014); plus its 1-year review (ibid, 2007) and book (Nutt et al., 2007b); the Academy of Medical Sciences' review report and summary, and its accompanying public engagement reports (ACMD, 2013). To this we include the only evidence traces left of the ACMD's Cognitive Enhancement Working Group that are public; the letters between Jacqui Smith and David Nutt (Smith, 2009; Nutt, 2009a) stating it will be convened, and the ACMD (2010) annual report which states it had stopped (but would be continued).

There are three types of documents which can be considered to belong to the *Herkunft* (descent) of these initial documents. The first belong to those which were produced to support the production of the previous documents. These are the minutes from the meetings, the papers circulated prior to and during meetings, emails and letters sent to recruit individuals and organisations to participate, briefing papers, event schedules, press releases, and the like. Collecting these type of documents cannot be done methodically, in large part as they are not available to the public. Freedom of Information requests were able to provide some of these, although the minutes from the Foresight project were missing some meetings, no minutes were kept for the ACMD CEWG, and the Academy of Medical Sciences provided no response to my requests for minutes or details regarding the *Brain Science, Addiction and Drugs* report. The other documents I was fortunate enough to collect from my interview participants who offered to provide them.

The second type of documents are much harder to identify for the relation between them and the initial documents are not necessarily explicit. These are the documents that were produced partially as a result of the initial documents. Whereas the relation between the initial documents is referential, the Foresight project results in the AMS documents, which in turn produces the ACMD CEWG, and there are those documents which are not referenced. For example, documents from the BMA (2007) which involved similar individuals at the same time of the cognitive enhancement case study who then use the same ideas and reference points. Documents that were influenced by and, perhaps, subsequently were to influence the policy activities but were not themselves part of the policy-making process as traditionally understood were also included: e.g. journal articles; learned society reports; newspaper articles; Select Committee reports; blog posts; radio interviews; Hansard.

There is a third type; a kind of subset or inverse of the second, documents that preceded the initial documents and made the initial possible in the first instance. This would be the ground from which emergence was made a possibility in that moment of its specificity. Identifying which documents were of this type was not a simple process. It could not simply include everything to which the initial documents make reference, because this provides no means of evaluating the significance of the relationship. Plus it would ignore documents and statements which are not referenced but were still influential. At the time there was not much of an explanation for why

cognition enhancers emerged as a point of interest. These documents primarily became evident through the process of the interviews, with interviewees highlighting activities that they deemed relevant. For example, the activities of the Cambridge University Government Policy Programme (CUGPOP) were never noted in the documents of the initial, first or second type, but they were identified during my interviews and I was subsequently able to access them from the time as they are not currently in the public domain.

An archive, then, is the body of statements from which a discursive formation can be read. The necessity to revert to the archive rather than the object itself is a result of the breaking of the literality of language between a name and its object or idea. But because there is no fixed relationship between a name and its object, it must be accounted for why language does not become meaningless, with words being able to mean anything that the user wishes. Production occurs within articulations that provide a semblance of a temporarily stable entity, the particularity of which are without fixed determination but are not open to free-floating meanings because the articulations must be understandable within the given discursive community for otherwise any new articulation would be idiosyncratic and nonsense. Articulations work to fix objects to particular identifications in a relational and negative relation. This is the matter of contingency which is the result of articulations that provide overdetermined objects their temporarily stable formations as a given identity. Identity is the product of ‘fixing’ an object, or at least making the appearance of a fixedness.

## **§2. Identity and Cognition Enhancers**

In Chapter 3, I demonstrated the overdetermination of cognition enhancers. Here I turn to their contingency, arguing they are made contingent through a production of their identity (as cognition enhancers) made possible by articulations that fix them in relation to assumptions of the normative body. This can be seen within the bioethical-philosophical literature in the academic discourse, where cognition enhancers come to possess a residency which is could dramatically alter the shape of society. This alteration requires normative assumptions as to the normal state of a healthy human being, a construct which underpins the hinterland of cognition enhancers and which

the use of cognition enhancers are expected to go beyond. This sets the backdrop for the policy and control literature discussed in the next section.

The bioethical-philosophical literature on cognition enhancers can be considered to form two camps in a polarised debate:

‘most professional bioethicists – primarily American – have a libertarian, anything-goes approach to enhancement, cloning, and the rest, *embracing the inevitably progressive onward march* of science and medicine even towards what has been called transhumanism’ (Rose, 2008: 199; emphasis added).

That cognition enhancers should be freely available, or perhaps that restrictions on their use should be minimal, is sometimes referred to as the ‘liberal’ perspective or argument (Racine, 2010: 11; Heinz et al., 2012: 372). On the other side there are those, admittedly a minority, who ‘cry doom’ and who are referred to less often as belonging to the ‘conservative’ camp:

‘The conservative view also highlights the potential impact of cognitive enhancement on the nature of human achievement, on the humanities, and on the traditions that have supported the development of human cultures across centuries’ (Racine, 2010: 11).

The bioethical-philosophical debate on cognition enhancers in the articles tends to make unsubstantiated claims and is often prone to polemics (Outram & Racine, 2011). In discussing the bioethical-philosophical literature, I try to state both sides’ positions on individual topics in simple terms only, the nuance of the debates is expanded on only where it has relevance to the present study. Whilst it is important that ‘the ethical and practical challenges involved in the wide use of drugs for performance enhancement should not be underestimated’ (Racine & Forlini, 2009: 469), the focus of this section is to argue how these debates are structured through a logic of a ‘universal’ human that is to be made ‘better’.

## **§2.1 The Debates**

In the bioethical-philosophical literature on cognition enhancers, it is notable that the lack of evidence of efficacy for current cognition enhancers does not seem to appear to influence the arguments and considerations on either side of the debate. The enhancement debate, in which cognition enhancers are seen only as the most currently viable biotechnology (Farah et al., 2004: 421; Naam, 2005), is often conducted at a level of abstraction away from the material realities of current biotechnological

possibilities and, indeed, of society (Rehmann-Sutter, Eilers & Grüber, 2014: 2). This tendency in the neuroethics and bioethical literature to be rather removed from the evidence base has attracted criticism from Guyer and Moreno (2004), who noted that, within contemporary bioethical discourse, the science is weak, that citation practices poor, and that the scenarios bioethicists adopt to frame their discussions are more science fiction than facts of the day. In this section I have blended debates on cognition enhancement drugs and wider biotechnology enhancements as they predominately cover the same issues, and are often merged together in the literature itself.

### ***§2.1.1 Medicine, Treatment and Enhancement***

One of the first areas around which cognition enhancers raise ethical questions is the distinction between treatment and enhancement. When prescription drugs start to be used for purposes beyond their initial intentions, and used for cognitive enhancement or lifestyle reasons, it raises a provocative set of issues (Racine, 2010: 10). As it stands today, the few drugs which are considered to be cognition enhancers and which are more commonly known among the general population are prescription medicines. This means that for most individuals, the way to access these drugs is via a doctor's prescription, either their own (Petersen, Nørgaard & Traulsen, 2015b), or that of a friend or acquaintance (Checton & Greene, 2010). The possession of prescription medicines without a prescription is an offence only if they are controlled under the Misuse of Drugs Act 1971, and Ritalin and Adderall both fall within that category (Ragan, Bard & Singh, 2012: 589).

But this situation of a doctor as the main legitimate site of access for cognition enhancers raises dilemmas for prescribers when asked for drugs specifically or implicitly for enhancement rather than medical purposes, with 'patient-consumers who view physicians as gatekeepers' of cognitive enhancement (Chatterjee, 2004: 968), and little guidance for how they should respond (Larriviere et al., 2009). But as Meulen states: 'There is no consensus about what should be seen as legitimate medical needs or a normal application of medical technology' (2017: 18). Medicine is traditionally considered to be for the purposes of restoring the human to normal health, and enhancing an already healthy subject beyond that level is considered outside that purview:

'When a physician intervenes therapeutically to correct some deficiency or deviation from a patient's natural wholeness, he acts as

a servant to the goal of health and as an assistant to nature's own powers of self-healing, themselves wondrous products of evolutionary selection. But when a bioengineer intervenes for nontherapeutic ends, he stands not as nature's servant but as her aspiring master, guided by nothing but his own will and serving ends of his own devising' (President's Council on Bioethics, 2003: 287-288).

In addition, if cognition enhancers truly make a marked difference between the enhanced and the unenhanced, the 'natural' human body and consciousness could come to be considered 'imperfect' compared to the ideal of the enhanced (Rehmann-Sutter, Eilers & Grüber, 2014). A situation could occur that Dees (2007: 377) refers to as 'diagnostic creep' where a formally 'normal' state becomes a condition that can be treated; i.e. an unenhanced individual would become seen impaired and in need of enhancement intervention. Drugs such as Modafinil blur the boundaries of treatment and enhancement (Williams et al., 2008: 845; Rose, 2008: 199).

Nielson (2011: 25-29) argues that the problem with this sort of distinction of restoring compared to enhancing is that it begins with an implicit concept of what is normal health. For some, this means that the distinction between treatment and enhancement becomes of little practical use (Sandberg, 2011: 71). It is these ethical dilemmas that have resulted in guidelines being produced by professional bodies such as the British Medical Association (BMA, 2007), American Academy of Neurology (AAN, 2009), and the Commission de l'éthique de la Science et de la technologie (CEST) du Québec (CEST, 2009). The BMA and AAN reports attempted to provide practical support for medical practitioners, with the CEST report advising a more cautionary approach for medical professionals (Outram & Racine, 2011: 330-332). These three medical guidance reports – interestingly being produced in close succession to one another – were drawn from a necessity to respond to a new set of questions that cognition enhancers pose that mark them as clearly distinct from medical substances. This is why it is important to not conflate the use of cognition enhancers for medicinal and enhancement purposes.

### ***§2.1.2 Equality and Fairness***

A prescription is not the only means of obtaining cognition enhancers. Informal purchases from friends and acquaintances, a quick Google search for 'buy modafinil', 'buy Ritalin', or 'buy nootropics' which brings up sites advertising what are claimed



to be pharmaceutical-grade drugs without prescription, illicit websites like ‘Silk Road’, and Novel Psychoactive Substances with cognitive enhancement effects, all provide alternative routes. Each of these (plus gaining a prescription without a disorder) will require differing amounts of economic, social, cultural, and perhaps human, capital to be able to know and access them effectively.

This raises issues around equality and fairness as it will be easier for those in an already advantaged position to have access to and be able to use cognition enhancers. This could exacerbate inequality as ‘the rich, in addition to becoming richer, might also become stronger, smarter, and hopefully sweeter than the rest’ (Chatterjee, 2004: 971). It is possible that there would be the development of a two-tier population, the neuroenhanced rich, and the normal poor (Dees, 2007: 378), and as Sandel argues (2007: 15) if cognition enhancers result in having persistent improvements in performance that could then be passed on generationally, we may even end up with two subspecies of human being, the enhanced and the ‘merely natural’.

Some argue that furthering inequality is not sufficiently unethical to warrant concern, although mainly because it is argued that as a society we already implicitly accept such high levels of inequality that objections to cognition enhancers on this basis border on the disingenuous (Dees, 2007: 378; Cakic, 2009: 612). However, as Heinz et al., (2012: 375) note, just because inequality already exists, this does not mean that it is fine for it to increase. Another reason why some dismiss inequality as an ethical concern is that there is the belief that the use of cognition enhancers will benefit everyone, even those who do not use them, in a type of ‘trickle-down’-type effect (Dees, 2007; Levy, 2013), although this overlooks the fact that a more unequal a society is, the worse it is for everyone (Wilkinson & Pickett, 2010).

It is also argued that the financial barriers for the poor would only be temporary, because development is expensive, but it is likely that enhancement technologies will only be expensive initially, and that they will become more affordable over time as manufacturing costs fall (Naam, 2005: 62). There is a further argument that those who use cognition enhancers will further inequality, but that this ignores the ways in which their use might actually reduce inequality (Sandberg & Savulescu, 2011: 104). This line of argument, however, ignores the realities of the inequalities produced through capitalism and the lack of political will to significantly counter them.

A further dimension in which the use of cognition enhancers are considered unfair is in respect to how they could be construed as a form of cheating. This relates to the concern that ‘the use of drugs to improve physical or cognitive performance is that it gives an unfair advantage to those who take the drug over those who do not’ (Lucke et al., 2011a: 119). This may be compounded in a situation where some people do not have access, but others do, in effect removing a ‘level playing field’ (Dees, 2007). However, there are those that question why the use of cognition enhancers would constitute cheating when other techniques for improving performance, such as private tutoring, currently do not (Housden, Morein-Zamir & Sahakain, 2011: 122). As Schermer (2008: 85) notes, cheating is fundamentally a rule-based evaluation, thus it is not cognition enhancers that are objectionable *per se*, and as a consequence of this objection can be remedied by either altering the rules for their acceptance or applying controls and sanctions. As Bossaer and colleagues (2013: 970) ask, is the use of cognition enhancers significantly different from other techniques and resources, such as having a quiet apartment or a better computer, and could these not be considered as having an unfair advantage also?

### **§2.1.3 Authenticity and Autonomy**

The issue of fairness is in part weighed on by the feeling that achievements gained due to the use of cognition enhancers are of less value than if they had been achieved through hard work and dedication (Forsberg, 2013). This is based on ‘the idea that native or achieved excellence has a higher worth than a talent that is bought’ (Bostrom & Sandberg, 2009: 326). This itself involves a misleading assumption that cognition enhancers can replace the need to study or work. The cognitively enhanced person will still be required to dedicate themselves, they just might be more efficient or motivated to do the work (Lucke et al., 2011a: 119). Regardless of this assumption, it emerges via a belief that work and attainments achieved due to the influence of cognition enhancers are inauthentic.

This accusation of inauthenticity carries into all aspects of conduct of the cognitively enhanced individual, and even to the status of their self and their identity. For some, our brain is in some way central to our sense of ourselves, and therefore to actively alter our brains troubles the core of ourselves (Dees, 2007: 371). Their self and their experiences are no longer genuine, and this is considered problematic. However, as

Flanigan (2013: 338) points out, this objection is based on placing value on authenticity itself – which some argue is a defining character desire for people living in the West (Elliott, 2004 [2003]: 29) but it may not actually be held by everyone. Some people might prefer to live an enhanced life over an authentically normal one, especially if their ‘normal’ is considered detrimental by themselves, such as transhumanists.

For some, cognition enhancers are actually a way of enhancing authenticity, ‘by enabling one to base choices on more deeply considered beliefs about unique circumstances, personal style, ideals, and the options available’ (Bostrom & Sandberg, 2009: 327). But, if enhancement technologies are to make us able to choose who we are, ‘that in turn will make individual responsibility for our behaviours and identities more clear’ (Naam, 2005: 60). Naam argues this as a positive development. However, the critique of contemporary modernity by Bauman highlights how this is problematic (Davis, 2008: 75-78). If cognition enhancers enhance our responsibility to choose, we must understand how the options available to us are already limited within a range of social acceptability – drugs will make us smarter, more focused, and so forth, and how we come to choose which enhancements are right for us will be guided by the need to make the ‘right’ choices, as determined by experts and what everyone else does.

If people increasingly become required to make a choice over whether to use cognition enhancers or not, which ones to take, and the amount of risk to their health they are expected to take, it raises questions about autonomy, in particular the avoidance of coercion. ‘Unregulated use of CED [cognition-enhancing drugs] is unjust because it undermines the equality of rights and liberties of citizens wishing to enhance and those who do not’ (Dubljević, 2012: 30). The issue is where the coercion comes from. People could be coerced into using them either explicitly, for example, by employers who demand levels of performance only achievable through cognition enhancement use (Appel, 2007), or passively where people feel forced to use to ‘keep up’ with their peers. As Lucke et al. (2011a: 119) note: ‘People’s beliefs about the drug use of their peers have a large impact on their own willingness to use those drugs’. Under these conditions, is a person’s decision to use a cognition enhancer their own authentic choice or one they have been socially ‘coerced’ into believing it is something they do or do not want to do? Some authors have questioned if this would trouble a person’s

authenticity any more deeply than the socialisation into any other norm (DeGrazia, 2005: 112).

For some, however, the issue of coercion is not important if cognition enhancers are not dangerous (Dees, 2007: 381). The downplaying or denial of risk is representative of the fact that ‘there has been a conspicuous lack of attention in bioethical discussions to the safety of using psychotropic drugs for neuroenhancing purposes’ (Lucke et al., 2011b: 40). Some high-profile authors have advocated the use of cognition enhancers (Naam, 2005; Greely et al., 2008; Dees 2007; Savulescu 2005; 2011), suggesting their use should not only be accepted by society, but that they should be promoted within society. The potential benefit to society of using cognition enhancers is viewed in some cases as to be so great that their use could even be made mandatory (Levy, 2013: 38). At this point, the liberal perspective moves from not only a general acceptance or approval of cognition enhancers, but an actual proactive desire for them to be used. And in an argument that mimics that authenticity, cognition enhancers may be a way of promoting autonomy by providing a means to fulfil their life ambitions (Juth, 2011: 36).

#### ***§2.1.4 Human Nature***

The debates regarding the changing status of human nature are entirely speculative and based on the idea that drugs and other biotechnologies with substantial cognitive enhancement effect will be produced, often believed to be available in the near future. In the literature, it is suggested that the use of enhancement technologies can make us ‘better than well’ (Elliott, 2004 [2003]; Sandel, 2004), or ‘better humans’ (Miller & Wilsdon, 2006a) and in some cases in terms of how potential developments are discussed, ‘more than human’ (Naam, 2005; Sandel, 2007) and even ‘new breeds of humans’ (Savulescu, 2005). Indeed, ‘philosophers speculate about the possibility and the implications of people becoming “post-human” or “transhuman” and our development into a new species that has “super-human” powers’ (BMA, 2007: 2-3). Nielson (2011) describes how ‘nature’ or ‘human nature’ is often used as a normative value when evaluating the ethical considerations of cognition enhancers and other biotechnologies. Here however, I am focusing on how the supposed future cognition enhancers and biotechnologies are argued to be changing what it means to be human.

Through the ethical debates above, it becomes clear how for some on the liberal and conservative sides of the ethical debate cognition enhancers are something which can push us beyond normality. Cognition enhancers are putatively able to push human cognition beyond its normal limitations, in doing so it makes us more able to take control of who we are, help us fulfil our desires and become more than we could otherwise become, with conservatives believing this to be unethical. Many authors in the area of cognition enhancers have claimed they are ‘promising or threatening to drastically change the lives of all citizens’ (Dubljević, 2012: 29). Important here is that cognition enhancers sit within a much wider dialogue on human enhancements (Savulescu, ter Meulen & Kahane, 2011; Miller & Wilsdon, 2006b). Here the debate begins to move into the area of transhumanism (Rose, 2008: 199). Human enhancement challenges the meaning of human nature (Nielson, 2011: 19), it breaks us free of ‘evolution’s chains’ (Powell & Buchanan, 2011). At this level of the debate, trying to distinguish between cognition enhancers, cognitive enhancement, and human enhancement becomes difficult, as many authors slide between meanings and tend to not burden themselves with what the people they are citing mean, and often the terms are used interchangeably.

Conservatives, such as the President’s Council on Bioethics (2003: 150), Sandel (2004; 2007), and Fukuyama (2002) warn against it, claiming it is ‘to become as gods’, violating what it means to be human. Liberals such as Harris (2010 [2007]), Bostrom and Sandberg (2009; Sandberg & Bostrom, 2006) and Hughes (2004) argue that ‘embracing our quest to understand and improve on ourselves doesn’t call into question our humanity – it reaffirms it’ (Naam, 2007: 10). In some cases they embrace the idea of surpassing ‘normal’ human ability (Harris, 2010 [2007]: 38-39). The debates about the ability to change what it means to be human implicitly involves a reflection on what it means to be human now; to transcend something you have to have an idea of what the starting point is, otherwise it cannot be transcended. This is the contingent basis that grounds the identification of cognition enhancers.

## **§2.2 To be Human?**

But what is the specificity of this contingent basis? To explore this I turn to a question that was raised in an edited chapter of *Cognitive Enhancement* (Hildt & Franke, 2013). In his contribution, Michael Hauskeller asks a very rare question of the cognitive

enhancement debate; ‘What does ‘better’ mean in a human?’ (Hauskeller, 2013: 114). His argument is a critique of the taken-for-granted *meliorism* of the liberal position; to make something better is good, therefore making better humans is good and should be pursued, a tautological argument. Hauskeller suggests that enhancement is not always better, for example mood enhancement would suggest control of emotions, but as it is the emotions that connect us to reality via the very fact that they are uncontrollable, enhancement is not necessarily desirable (p.117). The use of drugs for cognitive enhancement makes us better ‘not as human beings, but as performers of a certain task’ (p.117). For Hauskeller, the problem with the liberal position is that better is assumed to be a given, but when this is interrogated it opens up a rather large ambiguity within the literature highly open to interpretation.

Hauskeller takes objection with a lack of definition, and then proceeds to suggest that these definitions of ‘good’ are wrong. There is however an important reminder to be had from Ludwig Wittgenstein’s *Lecture on Ethics* (1965 [1929]). Wittgenstein argues that to state that some *thing* is ‘good’ is not a moral statement, but is a statement of fact in relation to a predetermined set of criteria; ‘Every judgement of relative value is a mere statement of facts and can therefore be put in such a form that it loses all the appearance of a judgement of value’ (p.5-6). For example, a ‘good’ runner is someone who is capable of running a certain distance within a certain time frame, thus the runner is not ‘good’ in a moral sense of the word but rather a description of ability (p.6). This means that in the bioethical debate, when a liberal states that a certain type of enhancement is ‘good’, or a conservative says that it is ‘bad’, they are doing so with a belief in a predetermined idea of what good or bad is in terms of the human condition. This means, whereas Hauskeller’s problem with the debates is with the lack of an explicit definition of ‘good’ which is highly open to interpretation, there is indeed a definition which is *latently* concealed within statements of the ‘good’ – one which posits a particular *type* of human as the standard by which to be measured. Thus Hauskeller misses the more revealing question; ‘What kind of ‘human’ is intended to be *made* better?’

Within disability studies there has been grounding of critiques of the human enhancement debate within a focusing on the signifier of the human (Rehmann-Sutter, Eilers & Gruber, 2014). Dan Goodley (2014: 88, appropriating Braidotti, 2013) notes how the construction of disorders or abnormalities implicitly contain within them

constructions of ordered or normal behaviours and bodies, the disabled body is the Other to the dominant Same of the abled body. The non-disabled body becomes the norm by which others are measured and judged. This takes on particular importance when considering transhumanist beliefs on the use of biotechnologies for cognitive enhancement:

‘No one is suggesting that medical intervention is wrong but where do we draw the line between making lives more healthy than poorly (which surely all of us would agree with) and promoting ableist standards of super health and wholeness that are, *by dint of their power*, in danger of rejecting those who fail to reach such standards’ (Goodley, 2014: 26; emphasis added).

This perspective from critical disability studies highlights how privileged ways of viewing the desired state of being human – abled – are uncritically circulated within the bioethical-philosophical literature on cognition enhancers and other biotechnologies.

To continue with Braidotti, in *Posthuman* (2013), we are directed to look more closely at the human. Braidotti draws on feminist critiques to argue that the human is a man, and uses da Vinci’s *Vitruvian Man* as the signifier to indicate the ideal and perfectibility of humanity. In this way the human becomes clearly gendered, to speak or think of the human being is to think of man. ‘That iconic image [of the Vitruvian Man] is the emblem of Humanism as a doctrine that combines the biological, discursive and moral expansion of human capabilities into an idea of teleologically ordained, rational progress’ (p. 13). This doctrine is able to claim a status to universality, to objective and unattached knowledge in what Haraway (1991: 189-195) refers to as the ‘god trick’ – the way that science erases the social production of knowledge to insist it is more discovered ‘out there’.

It is through this positioning that Others’ discursively concealed disadvantage becomes legitimised – the inferiority of Others is not the result of the social assemblage of resources and things, but is only ‘natural’. It is through this historical construct of this thing called ‘the human’, infected with relations of power as it is, emerges social conventions of ‘human nature’ as a norm and a standard (Braidotti, 2013: 26). Braidotti notes, in line with Goodley, how the Vitruvian Man is also clearly able-bodied, they also note he is white (p. 24). Whiteness is the norm of generality and humanity (Hunter, 2015: 11). The human that cognition enhancers are desired to

improve is thus a non-disabled, white man. The Human comes to signify ‘normality, normalcy, and normativity’ (Braidotti, 2013: 26), and thus the classed, cis-gendered, heterosexual nature of the human is also implicit.

These bioethical-philosophical debates are very interesting, and the issues they raise are of huge importance for society and how it will choose to respond to cognition enhancers and other biotechnologies. However, Quednow (2010) has called the cognition enhancement debate, a phantom debate. Quednow argues that cognitive enhancing drugs are a technology that is not yet capable of such putative improvements, and that they are currently unlikely to be achieved. The bioethical-philosophical debate is substantial in terms of volume and sophistication, yet it seems to be addressed to a reality which does not yet exist and may never come to fruition. However, this does not mean the debates are not important, indeed the debates may in the end have more importance than the putative cognition enhancers themselves. Regardless of the potential lack of a concrete base upon which the debates are concerned, they ‘may nonetheless have a real effect on what people see as the limits of the human condition’ (Rehmann-Sutter, Eilers & Grüber, 2014: 8).

With an inability to determine cognition enhancers in reference to something either internal or external to themselves, they can be understood as being constituted through relations of what kinds of people they are assumed to be able to enable;

‘Enhancement captures a certain historically and culturally specific value-laden domain of discourse related to human performance rather than having a substantive transcultural independent meanings’ (Savulescu, Sandberg & Kahane, 2011:4)

And these values emerge through an alignment with particular collectivities of people who have hierarchical value. It is this constitution that makes cognition enhancers a ‘new breed of drugs’ that the Foresight report claimed was distinct from medical and recreational drugs. Cognition enhancers as a non-disabled, white, middle-class masculine object, therefore occupying a subject position that is not a result of the drugs themselves but of how they are brought into being through their articulation. And this is where cognition enhancers become important in policy terms.

### **§3. Response to the Identity of Cognition Enhancers**

In *Pleasure Consuming Medicine* (2009), Kane Race argues how pharmaceuticals are productive of a logic for dividing the licit from the illicit. For Race, this is located in



the policing of consumption that marks medicines as legitimate (for the returning to health), whilst use deemed to be outside of this (for pleasure) loses that legitimacy and becomes illicit. Above, I already considered how cognition enhancers trouble the classification of treatments. What is particularly interesting is how cognition enhancers, as an enhancement technique that troubles the limits of medicine's legitimating logic of 'treatment', are unique in that their use is not deemed illicit. Classification of licit or not aligns in large part through how specific drugs become coded and associated (or identified) with identities and lifestyles.

Race highlights how 'lifestyle drugs' in particular reveal the tensions between enhancement and medicine, and the relationship between legitimate use and groups hierarchically categorised. He notes, for example, that Viagra use is medically sanctioned within normative parameters of legitimate sexuality. Its 'blockbuster' status is maintained through the continual ability to construct 'normal' sexuality, where its use can help a sufferer of erectile dysfunction return. Tensions erupt, however, when its use becomes considered 'recreational', which Race argues occurs through its association with gay men (see also Mamo & Fishman, 2001); however, cognition enhancers – at least within the academic discourse – do not make a move to becoming 'illicit', rather they occupy a different space.

Throughout the literature, cognition enhancers are considered a problem that is in need of a policy response. There are those from the conservative perspective that cognition enhancement is morally wrong, that would like to see them prohibited (President's Council on Bioethics, 2003). It is common for those in favour of cognition enhancers to argue that cognition enhancers are an enhancement technology no different to any other technology that has in some way improved the abilities of humans (Racine, 2010: 10-11; Lynch, Palmer & Gall, 2011: 126; Sandberg & Bostrom, 2006; Sahakian & Morein-Zamir, 2007; Savulescu, 2005: 39). Among the liberals, there are those who would like to see them readily available to the general public (Sandberg, Savulescu & Sinnott-Armstrong, 2011), or even made mandatory (Blank, 2010). A good overview of the ideological and theoretical standpoints are given by Mitrović (2014). From both sides, there is no detail on how policies of control should be considered in practice, with often vague statements about potential threats that may occur or ways of getting around suggested bioethical issues around inequality and the like.

Dubljević has provided two considered policy options for the regulation of cognition enhancers. The first is a system of taxation, fees, and occupational regulation, designed to counter the direct and indirect coercion of workers to have to use cognition enhancers, and offset advantage gained by those who use against those who would not. This ‘economic disincentives model’ would require licences for users, who would have to pay for courses on the effects and side effects, with exams. Taxation levied on the profits of cognition enhancement sales and regulation to mandate some should be reinvested in less economically-viable orphan drugs (Dubljević, 2012). The second (Dubljević, 2013) is a ‘coffee shop’ model for cognition enhancers with an acceptable risk-profile, whilst those with an unacceptable profile should be prohibited from general use, although this does assume that the risks can be clearly identified.

For some liberal proponents, the benefits of human enhancement are so large that they argue that not only should cognition enhancers be accepted by society, but that they should be encouraged (Dees, 2007); whilst for others there becomes a moral obligation to enhance, to make the best possible people that can be made (Savulescu & Kahane, 2009). The potential to enhance is seen as so beneficial, that for Levy (2013) it is actually detrimental to *not* enhance, and therefore there is a case for enhancement to be compulsory. There are those, however, who ask whether we knock on the door of eugenics when we think we can improve the capacities of human beings (Racine and Illes, 2006: 275). This is sometimes characterised as a ‘liberal’ or ‘new’ eugenics (Sparrow, 2011; Sandel, 2007: 75-83). Advocates of liberal eugenics claim an important distinction from the ‘old’ eugenics; they suggest that eugenics – the desire to improve the population by design – is not in and of itself a bad thing. The problem they argue, reflecting their often-libertarian ideologies, was the involvement of the state and its coercive element, and the use of ‘bad science’ focused on ‘race’ (Savulescu, 2005: 38).

The suggestion is that if individuals are freely able to choose their enhancements for themselves and their children, then this ‘new’ eugenics is not evil, but indeed may be morally good and enable choice. Kerr and Shakespeare (2002) have discussed how the logic of the ‘old’ eugenics that dominated science in the early 20<sup>th</sup> century – a time when science and middle-class hegemony became entwined with the ideology of eugenics providing legitimacy through the function, operation, and technology of the norm (Davis, 1995) – has had a lasting impact on the attitudes and approaches of

genetics. Many liberal advocates argue for genetic interventions and cognition enhancers plus many other technologies (Hughes, 2004: 35; Sandberg & Bostrom, 2006), so it is thus unsurprising that eugenicist ideas remain implicit in their arguments.

What is significant in all of these discussions around control is that the character is clearly different from that which surrounds other drugs. Race's (2009) analysis of the logics that pharmaceuticals discussed above, argues that they operate in mediating the use of medicines between treatment and enhancement. This is particularly interesting in a time when medicines are usually marketed through positioning a 'best' self as the desirable normal self that infers the necessity of treatment (Keane, 2011: 109-112) because cognition enhancers, go further by conjuring images of the self that goes beyond these limits. In this sense, cognition enhancers are outside the legitimating confines of treatment.

They do not, however, find themselves in the same discursive framework that other 'illicit' substances enter into once they break the treatment rationale. Other pharmaceuticals such as Viagra or Ritalin when their use fails to meet the identification of treatment – linked with Other identities and lifestyles – become recreational rather than medical. The response in the policy debate is therefore to treat them as illicit, as can be seen with Ritalin where 'its purpose in medical treatment is to produce a subject who is disciplined and self-regulating, and crucially, a subject who is more eager and able to work' (Keane, 2008: 406), a point that takes on saliency when the genealogy of ADHD has its emergence connected to notion of the problem boy and his problematic mother (Singh, 2002). Ritalin's 'abuse potential', to give pleasure to those whose use should create discipline, has resulted in methylphenidate, to give Ritalin its non-trade name, being a controlled substance in the US and UK.

This has corollaries with substances traditionally understood as recreational. The emergence of prohibition in the late 19<sup>th</sup> and early 20<sup>th</sup> centuries similarly connected to problematic populations, with a desire towards discipline:

'Opium was the drug of the seductive, secretive Chinese who spread their addiction to unsuspecting whites. Marijuana was something Mexican labourers brought with them to the United States that threatened America's young and promoted fighting among impoverished agricultural workers. Cocaine was a drug the Black underclass used that made them brazen and reckless and sometimes

even invulnerable to the bullets of police officers. ...these early anti-drug campaigns ...show how the nation became accustomed to the paradigm of drug abuse as a crime deserving significant punishment' (Provine, 2007: 13)

The relation of drugs to identities and lifestyles can be seen within critical-race scholarship and others who have linked the identification of some drugs (such as opium, cocaine, and cannabis) as deserving of prohibitionist responses being justified through the connection with racial minorities (Helmer, 1975; Musto; 1991; 1999; Lusanne, 1991; Manderson, 1999; Mauer, 1999; Alexander, 2010; Thompson, 2010; Murch, 2015). A recent special issue of *Contemporary Drug Problems* has also brought critical feminist approaches to this consideration of identity, demonstrating the gendered and intersectional nature of drugs (Campbell & Herzberg, 2017; Kohn, 1992). Hansen (2017) has shown how the US's opioid crisis has shifted from a previous criminalisation associated with Blacks and Latinos, to a medicalisation (and therefore legitimate) of use, acting as a 'pharmaceutical prosthesis' for the maintenance of White supremacy, "a tool for maintaining the productivity of White, middle-class, addicted women as mothers and professionals' (2017: 323).

We can here be reminded of Fiona Williams' (1995 [1989]) relational critique of the welfare settlement (see Chapter 2) which is useful for appreciating the 'organising principles' of welfare. She advocated that the development of social policies has been orientated around the identity of the imagined citizenship, based on notions of work (class), family (gender), and nation (race). Williams' historical analysis demarcates how policy development and implementation has been intertwined with conceptualisations of what constitutes family life, national unity, and national culture – that by their very nature are bound up in social categorisations of hierarchical value. Combining Williams with Race's analysis of pharmaceuticals, with how drugs are constituted as either licit or illicit on the basis of the assumed populations they enact, points to how the identity of drugs enters into these logics of policy-making.

The use of cognition enhancers lies outside the legitimating intentions for restoring to health – proposing to become 'more than human' – but they do not elicit claims of being illicit as occurs with similar enhancement 'lifestyle' drugs. One aspect of this is cognition enhancers' putative mode of effect. In contrast to other 'lifestyle' drugs, cognition enhancers do not (or at least are not considered to) act on the soma, nor the affect; rather they target cognition, 'the most valued human resource' (Keane, 2011:

117). They act on a location that holds a privileged place in Western metaphysics, with a heritage running through Descartes' dualism of mind and body; mental activity is considered the answer to who we are (Rose & Abi-Rached, 2013: 1-8).

Cognition enhancers, by being aligned with privileged identities and lifestyles, conforming to normative ideals of intelligence, productivity, and self-realisation (itself within normative limits) whilst avoiding implications of pleasure, mean they are able to avoid the logic of the licit-illicit binary. The consumption of cognition enhancers is not considered to overflow the normal into the abnormal, but to reconstitute the potential of normality to align with a perfectibility of the human condition. In this way, cognition enhancers are indeed a 'new breed of drugs' (Foresight, 2005b: 3), not because of some newly discovered substance, but because their assemblage as a specificity is a contingency that produces them as an identity that is productive of alternative rationales; they are neither licit nor illicit. This indicates the link between the identity of cognition enhancers, which we understand as a contingent assemblage, and the policy responses to them.

## **Summary**

We have now arrived at our third element in the policy-making tripartite framework advanced by this thesis; objects and the centrality of identity in their organising logics of policy-making. Over this and the previous chapter, the foundationalist nature of objects has been subject to critique through the category of discourse. In the previous chapter, this began with a consideration of the analysis of history in which the problems of determining meaning and understanding between the text and the context opened up the problems of historical absurdities, particularly of presentism. To this we introduced the category of discourse, which was used to demonstrate the overdetermination of objects, and was applied to cognition enhancers to expose their overdetermination. The necessity to conduct such a deconstruction, and analysis of its subsequent contingent constructions, serves in part to demonstrate that policy-making over cognition enhancers cannot be explained by a reference to a final ground of cognition enhancers; there is no element of them that provides a fixed determinant by which to make judgements.

In this chapter, contingency was brought forward as a means of appreciating why discourse does not allow for pure relativism, as is often suggested against anti-

foundationalist approaches. Discourse, whilst inferring a non-necessary relationship between a signifier and signified, is a shared system of meaning. To use a discourse that is outside the community in which one operates is to be idiosyncratic and in turn to speak nonsense. Therefore discourse is always contingent on the community and its history of use that determines the viable conditions of possibility to make new statements. Identity is the hegemonic formation of a contingent articulation. If identity of an object does not exist within the object itself, and therefore must be made, it can only be relational and negative. Articulatory practices seek to identify an object by inferring which other objects it shares an identity, or by contrasting it with them. In this, the identity of an object becomes fixed within a system of relations to other objects with the system of meaning. At times, identity is open to contestation or becomes sedimented and stable. In either case, an identity is always the contingency of an object. This is the other side to overdetermination within the category of discourse.

The contingency of cognition enhancers reveals how they are brought into a relationship with a normative body that acts as the constitutive support of their identity. The identity of cognition enhancers is based on an assumption that these drugs do not repair a disorder (and therefore fall outside the legitimation of medicinal drugs) but rather take an already 'healthy' individual and makes them 'more than' a construction of the human, which is tacitly imbued with normative relations of ableness, whiteness, heteromascularity, etc. This presumption exists in the hinterlands that constitute these drugs as 'cognition enhancers'. Drawing on Race's analysis of the logics of pharmaceuticals in legitimating use or denying it as illicit, I argued that this identity of cognition enhancers is the reason why the policy discussions over cognition enhancers situated them as outside of licit-illicit drug binary. This demonstrated the role of identity of objects in the formation of policy logics.

This, along with the work conducted in Part II, outlines the centrality of identity to policy-making; which this thesis argues occurs in the interrelationship between the imagined citizenship, policy actors and objects. The first two elements, covered in Part I, emerge from a lineage of scholarship within critical social policy informed by critical-race and critical-feminist, psychosocial thought. With the introduction of the importance of the identity of objects in policy-making where identity is not taken as an essence of the object, I am making a contribution to policy theorising within critical

social policy. So far, in Parts I and II, I have handled the elements of social policy which direct us towards the centrality of identity as the organising logic of policy as discrete elements. In Part III, with the use of an original case study of cognition enhancers in UK policy-making, I now turn to demonstrate how these elements interact with one another to produce policy.

## **Part III – Genealogy of Cognition Enhancers**



## 5. Foresight and Before

### Introduction

In the Introduction, I highlighted the principle concern of this thesis that is rationality is an insufficient principle for theorising the organisation of social policy. The alternative proposed is that policy-making occurs through the interaction of the imagined citizenship, policy-makers, and objects, organised under a principle of identity. Parts I and II have looked at each of these elements individually, situating the centrality of identity in each for policy-making. In Part III, I present a genealogy of cognition enhancers in the UK policy-making apparatus to explore how these three elements interact with one another in the enactment of social policy. The argument is not that a given identity determines that policy will be a certain way, but rather that in the intersection between these identities in their specificity will be productive of particular policy enactments. The assemblage of identities, to borrow words for a different purpose, are ‘various modes of ordering [that] include, exclude, depend on, and combat one another’ (Mol & Law, 2006 [2002]: 9). It is to this that this chapter turns.

A point to be reiterated here is how I view the relationship between those I have interviewed and social policy-making. In Chapter 2, I discussed how the relational and affective dynamics of policy-making move us away from ideas of ‘government’ towards notions of ‘governance’. This significantly expands the conceptualisation of what constitutes policy-making. Rather than a monolithic structure of ‘what government does’, policy came to be understood as a vast and dispersed assemblage of actors (not necessarily exclusively human actors, as it includes policy documents as material semiotic actors; see also Hunter, 2008; 2015: 16) who enact policy. This is significant because of the status of those interviewed for this case study might not be considered policy-makers (in fact, some would lament their inability to actually make policy: ‘I have done a lot of work for the government [...] trying to help develop policy [...]. Mostly failing. For their fault, not mine.’ (interview, 02:43). Most were academics and journalists, and would usually not consider themselves as policy-makers, more likely to justifiably call themselves ‘experts’ in their fields. However, because of the more fluid conceptualising of policy-making employed and developed in this thesis, they are (or were) policy-makers.

A similar issue concerning the nature of the object being analysed that needs addressing before continuing with the genealogy of cognition enhancers on the UK policy agenda is that, because of the specific assemblage of policy in this period, a significant proportion of the analysis conducted through these next three chapters is discussed in relation to practices of science. This could result in accusations that what I am discussing is science making rather than policy-making. This highlights a further point where clarification is needed. There are, I propose, two important aspects which such an accusation ignores. Firstly, the ability to distinguish between policy-making and science is not necessarily as simple as might first be imagined. Policy-making, as is clearly demonstrated in this case study, is highly informed by science, and scientific endeavour relies significantly on policy as a hinterland, for example, by relying on the funding that the government provides. Secondly, in both domains, their ideal-typical conduct should be characterised as technical and rational endeavours (see Chapter 1 for rationality and policy; and Latour, 2002 [1987]: 21-62; 180-185 on technoscience). The principles both idealise overlap significantly, but they are subject to the same epistemological critiques concerning the status of objective reality. Because they are so intertwined and share the same principles, parallels can be drawn between them.

This chapter introduces the ‘Foresight period’ of cognition enhancers on the UK policy agenda. The UK government’s Foresight programme was originally introduced in 1992, to provide an environment for science and business to inform UK policy. Foresight’s *Brain Science, Addiction and Drugs* (BSAD) project, with which this genealogy is concerned, was tasked with considering the potential policy challenges facing the UK over the next 20 years. As the Academy of Medical Sciences’ review was also called ‘Brain Science, Addiction and Drugs’, I will generally use the term ‘Foresight project’ apart from when necessary to distinguish from Foresight’s wider activities and the BSAD project itself.

The beginning of this genealogy takes us to the early years of the turn of the millennium. The New Labour government has not long won its second election in a row after 18 years of Conservative governments. The mood of the early 2000s was one of optimism. In many ways, the emergence of cognition enhancers on the UK policy agenda is a reflection of this period. This genealogy covers how cognition enhancers emerged onto the policy agenda; the conditions which coincided with it,

how it set up the possibility for future considerations of cognition enhancers opening up some ways of talking about cognition enhancers and closing off others.

This chapter demonstrates how the identities of the policy-makers were necessary for bringing cognition enhancers into the arena of policy-making, how the identity of cognition enhancers was open to contestation over this period, how certain members within the policy-making network were able to have one identity of cognition enhancers take precedence over another, and how these were engaged with in relation to imaginings of potential future societies and the identity of UK citizenship (an imagined citizenship). Analysis of the emotions as productive of power is drawn on here to understand how ideas of meliorism, hope and disappointment, created investments in and between identities of cognition enhancers, policy-makers, and imagined citizens.

Before continuing, a brief reminder. At times documents will not carry citations, and interviewee's titles will be relevant only to their given quote, so as to reduce the possibility of inferred disclosure. For similar reasons, anyone involved with the BSAD project will be referred to as a BSAD member. Extracts have been edited for clarity where this does not impact on meaning or analysis.<sup>24</sup>

### **In a Remote Corner of the Universe**

Selecting a starting point in a genealogy is always somewhat arbitrary. This in the nature of discourse. A text cannot be defined with clear boundaries, it is always in conversation with a number of other texts either explicitly or not (Foucault, 2002 [1969]: 26). In trying to determine an origin of a genealogy, the origin will necessarily stand in relation to other origins, the origin of the origin, and this second origin its own and so forth. This is the risk of the search for origins, in trying to determine the instigating causal relation one recedes ever further back into reduction *ad absurdum*. The emergence of cognition enhancers onto the UK policy agenda is not a clearly defined event, but attempts at demarcating them illustrate the highly networked arena which this genealogy has excavated. The early moments of this genealogy sees scientific experts as the policy-makers over this period, especially of neuroscience,

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<sup>24</sup> Or at the request of interviewee.

that acts as an identity of policy-makers to which will later interact with the identities of imagined citizens and of objects.

The start of this genealogy begins in a small room at the University of Cambridge, ‘...in Sydney Sussex, was it Sydney Sussex? No it was Corpus, Christs, I don’t know,...’ (interview, BSAD Member: 04:20), a space where the production of knowledge and the production of policy became entwined. The people in this room set an agenda, provided accounts of the appropriate knowledge specialisms for approaching this agenda, and many were subsequently to become key players in this genealogy. Although it is unlikely that those involved would have imagined it would take the path it did.

In the 1-year review of the Foresight project, the instigating event for the development of the BSAD project was described thus:

‘The BSAD project was developed out of ideas discussed at a brainstorming event held in July 2002 chaired by [the] Chief Scientific Adviser to the UK Government (and Head of the Office of Science and Innovation) and involving pre-eminent academics identifying significant issues with a scientific impact over the next ten years and more’. (1-year review)

Further details of this brainstorming event are uncertain. Excluding the possibility of the July 2002 being wrong, it seems likely that this brainstorming event developed out of ‘this seminar that, where all these ideas originated’ (interview, BSAD Member: 13:24) held at the University of Cambridge. A small event, ‘There was [sic] 14 of us maybe, maximum’ (interview, BSAD Member: 04:20), but one which would begin the events which resulted in the emergence of cognition enhancers on the UK policy agenda. Leading experts in the science of drugs, and influential policy-makers gathered and considered the problems that drugs posed to society.

The seminar was part of the activities of the Cambridge University Government Policy Programme (CUGPOP). During the late 1990s and early 2000s, CUGPOP hosted a bi-annual series of seminars ‘which were designed to inform and promote debate in a unique setting on matters of immediate importance to policy-making’ (CSaP, c2017). This picked up on the difficulties of implanting evidence and knowledge within policy that was gaining traction with the emergence of New Labour rhetoric. CUGPOP was an embodiment of the belief that the solution to policy problems is ‘fixing’ the relay of evidence to policy-makers. In a sense, the story of

cognition enhancers also acts as a case-study of when evidence is allowed to motivate policy agendas, and the lessons that can be learned from this.

Some of the topics covered by CUGPOP included genetic cloning, food security, cancer, information and communication technologies:

‘CUGPOP was a great success. From Cambridge-centric beginnings it grew into a major conduit of knowledge exchange between academia and government, attracting speakers from across the UK and beyond. Seminars were attended by ministers, senior advisers and civil servants, and received funding from the Royal Society and the [Government’s] Office of Science and Innovation, among others. [With an] interdisciplinary approach to a diverse range of issues’ (CSaP, c2017).

A number of topics covered in the CUGPOP seminars also made their way to Foresight technology projects. The level of success of CUGPOP in connecting academics to policy-makers achieved recognition by the Government’s Council for Science and Technology (CST, 2008: 15). Part of the relay between the seminar series and government policy-making was the overlap of the government’s Chief Scientific Adviser being an organising member of CUGPOP. Today, the Centre for Science and Policy (CSaP) at the University of Cambridge continues the work that CUGPOP started in a much more organised and coordinated manner, connecting academics to ‘public policy professionals’.

The specific seminar that traces our genealogy back occurred in early November 2001, with CUGPOP hosting a seminar on the topic of ‘Drugs of Addiction: Biological, Medical, Legal and Ethical Aspects’. The topic of drugs was considered to be ‘self-evidently one of major importance’ (CUGPOP, unpublished document) by the organisers of CUGPOP. Whilst the stipulated concern of the seminar was of the biological, medical, legal, and ethical, it was the former two that constituted the leading focus with four out of the seven presentations focused solely on bio-medical concerns. A fifth although principally regarding legal matters, was presented by a pharmacologist and subsequently framed by such specialism. This focus is explained in the introduction to the seminar by a GUGPOP committee member, who highlighted the substantive shift in the way the brain has become studied. Previously this could only be done through the dissection of dead brains, but now the living brain could be studied. Brain imaging and molecular biology made the brain brought new insights to brain addiction. The hope this generated was clearly present in the final report: ‘This

knowledge leads to the promise of new treatments at the pharmacological level' (unpublished document). Their brief introduction does provide a nod to the 'other factors at work' in addiction, but the topics of the seminar does indicate their location in the hierarchy.

The seminar brought together some of the leading scientific minds on drug policy along with highly influential policy-makers. It is likely that among them was the Government's Chief Scientific Advisor (CSA) who had recently taken over the government's Technology Foresight programme. Previously to this, the Foresight programme had taken on lots of small projects, producing short reports, 'just panels of experts telling government what they thought' (interview, BSAD Member: 17:13). However it was deemed that these reports were not worthwhile: 'what are you really going to say there that [industry] doesn't know already?' (interview, BSAD Member: 63:58), and at one point the government was going to close Foresight. With the appointment of the new CSA, it was decided that Foresight would take on fewer projects, but tackle them in greater depth, the Drug Science, Addiction and Drugs project being among the first of these new style projects.

The presence of the CSA at these CUGPOP seminars, and that some of the individuals at the seminar were to become involved with the Foresight project as members of the Foresight Project Management Group or as State of Science review writers or peer reviewers, highlights the networked nature of this case study. When compiling the archive for this case study, I began to notice that the same names appeared repeatedly throughout the documents, and I also discovered that it was not uncommon to find that people involved with the various projects which this genealogy covers will have had collaborations, both before and after. The point of networks is returned to in Chapter 7, but for now, the significance is that many of the individuals at the CUGPOP seminar continued to be involved in this genealogy and went on to shape the direction of cognition enhancers in policy discussions for years to come, and were central to the genealogy that follows.

It is unlikely that cognition enhancers were discussed at the CUGPOP seminar, nor is it likely that they were raised at the brainstorming event noted in the 1-year review. Even if they were, they did not leave a significant impression on the CSA as cognition enhancers were not in the original remit of the Brain Science, Addiction and Drugs

project. Also of note is that, by the time the Foresight project began in July 2004, the emphasis on science has been made explicit and placed at the forefront (evidenced by the project title itself: '*Brain Science, Addiction and Drugs*'). This is likely as a result of Foresight being under the office of Science and Technology, although the specific project was under the Department of Health. Additionally, a previous Foresight project on 'cognitive networks' came to a conclusion as *Brain Science, Addiction and Drugs* was in its early stages which was 'provisionally called "Brain Science and Drugs"' (Foresight, 2003: 8) at the time.

This is interesting because within the project titles, there is an assumption made implicit that the answer to the project's central question of how to manage the use of psychoactive substances in the future to the best advantage for the individual, the community and society, is best addressed by scientific and technical knowledge. This question could be addressed from a number of angles, but from very early on, with its roots in the CUGPOP seminar, scientific expertise especially around neuroscience gained a central position for conceptualising this project, one that would persist into the later stages of the genealogy. This shift from 'biological, medical, legal, and ethical' to simply 'brain science' is indicative of the central role that brain science was to go on to play in the first stage of the cognition enhancer period.

These early (even preliminary) stages indicate the importance of the identity of policy-makers in policy-making. Those involved occupied positions of scientific expertise, whether academic or civil service. In their interactions with one another they came to produce policy discussions that were framed within their own paradigms of neuro-chemical understandings of the policy problem of drugs. What we see is how the identities of those involved privileged particular forms of knowledge, those of scientific paradigms and neuroscience especially. It is these investments that go on to interact with the objects of drugs during the Foresight project. Even the fact that cognition enhancers emerged at all in the Foresight policy discussions can be understood as a result of the interaction of the identities of the policy-makers involved.

## **Development**

Interview, 02:11: [...] You find that each of these technologies has its moment in the sunlight, so that neuroscience, and the possibility of cognition enhancers and that kind of thing, [...each] had its moment[...] (emphasis added).

I like this quote from one of my interviews as a metaphor for this genealogy of cognition enhancers on the UK policy agenda. The three moments of dawn, noon and dusk, capture the three stages into which I have split this genealogy. There was light before it broke onto the agenda (Foresight), sat highest in the middle (Academy of Medical Sciences), before fading at the end, but with light remaining after it had passed the horizon (Advisory Council on the Misuse of Drugs, and beyond). Cognition enhancers' moment in the sun in terms of the UK policy agenda is a curious one. They were not to emerge on the UK policy agenda until the Foresight's BSAD project was already underway. Its occurrence is surprising given that they so easily could have never entered this arena. Understanding the conditions of possibility that culminated in the appearance of cognition enhancers reveals much about the relationship between the taken for granted assumption of necessity and the actually rather fragile contingencies behind them.

Given that cognition enhancers were not brought up at the CUGPOP seminar, and unlikely to have been so at the brainstorming event held by the CSA, the question is why they emerged in the Foresight project. I ask this question with two points in mind. Firstly, because it would not be definite that cognition enhancers would appear if a similar review was to be conducted today. This is backed by two intuitive reflections: (a) when I first started considering the topic of cognition enhancers four years ago now, I was completely unaware of them myself despite my long-standing interest in drug policy; and (b) talking to others with an interest in drug policy at workshops or conferences, it appears most of the field is also unaware or at least uninterested in them. The second point is motivated out of epistemological considerations that the account of history tends to attest to the necessity of events as though they were always going to happen – as if they are obvious given the situation (the problem of presentism) – but in fact they just so happened to be that way rather than another way.

This presentism can be seen from a number of the interview extracts with those involved with the Foresight project. Seeming to suggest that the inclusion of cognition enhancers was an obvious one for such a project to consider:

ARB, 52:44: [...] looking back at that period, there is a question of why did it, why did cognition enhancers come up, it's one of those sort of things...



BSAD Member, 53:21: Well, because if you, we were running a project on the future of the brain and drugs, it would be surprising if we didn't.

BSAD Member, 13:39: [...] well it's a natural topic to discuss in the context of addiction.

ARB, 13:45: Yes?

BSAD Member, 13:47: Because one possible motivation to take drugs is to change your central state, your central functioning, and, obviously some people take drugs to enhance performance. There is an interface between what we call motivational effects of drugs and cognition. Okay. Now many recreational drugs, you know like amphetamine or cocaine, have effects on motivational systems in the brain. And they clearly produce cognitive effects, which, well, acutely, in laboratory in low doses, and all of that with all those caveats, can enhance aspects of performance, there is no doubt about that. I mean ADHD as an example, which is psychoactive disorder is essentially best treated with stimulant drugs like amphetamine and Ritalin. Okay. *So it's a natural thing, to have some consideration of a topic on cognitive enhancement, even in, an overall topic on drug addiction.*  
(emphasis added)

ARB, 13:06: Okay, and so how did cognition enhancers become something of interest to the project management group?

BSAD Member, 13:22: I think they came, I think it was, more that they were of interest because they were an area which, they were a boundary, they were a boundary zone. You know, were they drugs? Were they medicines? Were they good, were they bad? They were kind of exemplars of the sort of, the sort of future challenges, cause they were the future they weren't the present really. So I think that was why it was seen as something that we needed, if you're gonna think 'what's going on in 25' they're things, you know, in theory cognition enhancers could, could have evolved enormously in the subsequent 25 years, so *they were seen as a necessary and potentially important area to consider.*  
(emphasis added)

From these interview extracts with members of the BSAD project, cognition enhancers were a 'natural topic', something that needed to be considered, and even

‘surprising if [they] didn’t ’; in other words, they were an obvious topic. But cognition enhancers were not raised at the CUGPOP seminar, nor at the brainstorming event. Furthermore cognition enhancers were clearly not necessarily an obvious topic for the Foresight project to consider, otherwise they would have appeared in the preliminary scoping activities cognition enhancers were not raised.

The project began with the Foresight team – civil servants in Foresight – using Shell’s Seven Question technique<sup>25</sup> with stakeholders and influential people (interview, BSAD Member: 03:13). From the Seven Question technique, the Foresight team conducted an Issues Tree Analysis to identify higher level questions and what kinds of evidence would be required to answer them (interview, BSAD Member: 08:05). This formed the basis on which the BSAD project got under way. A Project Management Group was set up, which included three scientific experts who had been recruited to guide and advise project. It is within the Project Management Group that cognition enhancers emerged as a major focus of the project:

BSAD Member, 25:42: We weren't looking to find cognition enhancers, but it was one of the things that was particularly interesting in the study. Because I think a lot of people just thought it would be 'how we going to treat people who are taking heroin?' But the picture we saw of the future was potentially very different with humans being able to take drugs which were quite cleverly designed to achieve particular goals.

So how was it that cognition enhancers entered into the UK policy arena? In trying to understand why cognition enhancers emerged, the use of BNIM-inspired interviewing was able to move away from generalised arguments of their ‘obviousness’, towards more ‘lived out’ explanations:

BSAD Member, 13:32: [...] I would say; the original focus of the project was partly on addiction, in the sense of addiction to, you know, legal and illegal drugs, although most of what we did was on

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<sup>25</sup> The design of the Seven Questions technique is to ‘Start with an invitation to the contributor to talk about what he/she sees as the key factors shaping the future of ... When he/she has exhausted first thoughts, use the questions as a set of ‘triggers’ for drawing further response’ (SAMI Consulting, n.d.). These prompts invite the contributor to consider what they would ask a clairvoyant about the future, their optimistic and pessimistic visions of the future, what factors would be most important to achieve the optimistic outcome, what has caused the current situation, what decisions need to be made now to achieve the optimistic outcome, and what would one do if they were in charge.

illegal drugs, [...] and then there was also a further interest in our growing awareness of the brain and how it affected by chemicals in general, which, turned into an interest in cognition enhancers but I think, if you had looked, if you have over the very early paperwork of the project, you probably wouldn't find cognition enhancement was an early part of its work, it became an interest part-way into the whole thing.

ARB, 14:36: Oh, how did that...

BSAD Member, 14:40: I think because people kept mentioning it, really. And perhaps [another member] more than most, [...]

This other member was one of the scientific experts brought onto the Project Management Group. At this time, they had been part of early research into modafinil as a cognition enhancer, and continue to be an expert on them. This is not to state this member of the Foresight project is the causal reason for cognition enhancer's inclusion, and especially not to claim it was wrong for its inclusion. But it does indicate how the emergence of cognition enhancers within this project on UK drug policy is to be located within an assemblage of the identities of the policy-makers involved; their own intellectual projects with which they gained academic positions were able to make an influence within policy-making.

Cognition enhancers were brought up in one of the State of Science Reviews – reviews commissioned by the BSAD management group to provide up to date overviews of developments in various areas considered relevant. Two of their authors were also leading researchers also in cognition enhancers at the time. By the third meeting of the Project Management Group, with the internal dynamics of the team having a leading expert on cognition enhancers within, decided that they were worth pursuing and commissioned a separate review on cognition enhancers. The cognition enhancers review would be one of 15 reviews that were conducted for the BSAD project.

The far more coincidental emergence of cognition enhancers on the radar of the Foresight project stands in opposition to the perceived 'obviousness' of their inclusion. The presentalism of the accounts of cognition enhancers' inclusion can be seen most starkly in a press article written and published after the Foresight project had finished:

‘The motivation for this project was the confluence of our increasing knowledge of the human brain, growing problems with neurodegenerative diseases such as Alzheimer’s, social concern about illicit drug use, and the emergence of new drugs that may help the performance of the brain’ (press article)

Here, cognition enhancers have become a reason for the Foresight project as if they were of concern prior to those involved and the Foresight project was convened specifically to address them, amongst other things. This excerpt shows that cognition enhancers were to become of significant importance within the Foresight project. To understand how cognition enhancers were to move from something ‘people kept mentioning’ to occupying a prominent position, requires an account of the affective economy at play at this stage of the Foresight project.

### **Hope in a New Dawn: Emotions in Policy and Science**

In Chapter 2, I introduced emotions as productive of power, and how they work in an ‘affective economy’ (Ahmed, 2004) to create attachments and investments between people and objects. In this section I want to explore how the emotion of hope in the form of meliorism circulated during the Foresight project to be able to invest cognition enhancers with a positive evaluation, thus creating a relational identity. Policy-making and science are very similar in their tendency to push emotions to the margins. For both, it is common for emotionality to be considered something that is alien and counter to the endeavours of good practice (as demonstrated in the claim that science is ‘objective’, and policy should be ‘rational’). But emotions do play an important role in both (in social policy see Chapter 2; and in science, see Kerr & Garforth, 2016; Fitzgerald, 2014). Accounting for the circulation of hope and meliorism works to situate how cognition enhancers were able to move from ‘mentions’ in a State of Science Review, to becoming one of the more fascinating aspects of the BSAD project.

In the case of cognition enhancers, the emotion of hope played a very important role in giving vitality to its presence within UK social policy-making. Without hope in its various forms and locations, cognition enhancers would not have emerged in the first place within the project. The fading of hope over the following five years of the Academy of Medical Sciences review, and subsequent analysis by the ACMD into the Independent Scientific Committee on Drugs saw cognition enhancers fade from the

policy agenda. It is also only by connecting cognition enhancers to wider enhancement technologies that meliorism remains attached to enhancement drugs and continues to ‘stir in the background... a sort of traffic noise’ (interview, BSAD Member: 53:13).

The hope surrounding cognition enhancers during this period was situated within the wider movements and increasing technological developments of brain imaging techniques. ‘Neuroscience was becoming more interesting more generally because imaging technologies had got to a point where fMRIs were able to give us better insights, or so we thought,’ (interview: 58:16). These new forms of being able to scan the brain were to alter the register on which science was able to mark its traces:

‘up until the mid-twentieth century, psychiatry could only gain access to the interior of the mind through looking at the surfaces of the body and listening to and interpreting the voice of the patient’ (Rose, 2000: 11, cited in Martin, 2004: 193).

Functional magnetic resonance imaging (fMRI) meant that for the first time it was possible to watch the brain under the effects of different stimuli, to see precisely what changed and how, and to do so non-invasively. This is highly simplified, and there is much debate within the neurosciences as to precisely what fMRI ‘sees’, but that assumption underpinned the view of neuroimaging (Rose & Abi-Rached, 2013: 74-81). Similar meliorism had motivated the instigating CUGPOP ‘Drugs of Addiction’ seminar (unpublished CUGPOP document).

The significance of this shift was not lost on the Foresight project, which did commission a State of Science review on neuroimaging, as can be seen in some of the statements in how it framed the current moment and the near future as it saw it:

Though the changes we saw in the second half of the twentieth century were dominated by developments in computers and telecommunications, biology and medicine also made huge strides. The greatest changes we will see in the twenty first century may be brought to us through developments in our understanding of the brain. (Executive Summary)

Our understanding of how the brain interacts with drugs, about differing susceptibility to drug effects, and about genetics that may underlie different drug responses is advancing rapidly. A range of science disciplines, including neuroscience and pharmacology, is feeding this advancing knowledge, as is the growing scopes of imaging technology. (Press article from BSAD project member)

We are on the verge of a revolution in the specificity and function of the psychoactive substances available to us. In particular, we expect

to know far more in the near future about their effects on individual users. (Executive Summary)

This language from Foresight conformed to a ‘neuro-reductionism’ (Martin, 2004) which had been ongoing (and which continues, see Rose & Abi-Rached, 2013) within the neurosciences. Emily Martin (2004: 193-201) demonstrates how the neurosciences have come to reduce the mind to the workings of the brain, in which the Cartesian split of the brain and mind no longer seems tenable. The development of these different ways to know the brain have altered our relationship with ourselves: ‘In societies of... the West, our brains are becoming central to understanding who we are as human beings’ (Rose & Abi-Rached, 2013: 2). Martin identifies how the image of the ‘neuron man’, an illustration of a human figure consisting of only its nervous system, is produced and reproduced within neuroscience texts. With this image comes an assertion that ‘all kinds of learning can be reduced to the operations of neural nets’ (p.199). In other words, all ‘higher functions’ become understandable as being the direct result of the brain. This in turn gets expanded out to wider structures, and the development of ‘brain-worlds’ (Pykett, 2013).

This way of conceptualising humans as reductive to neurological processes can have powerful implications, as Martin (2004: 199) notes:

‘With their research expensively underwritten by foundations, corporations, and the government, and their claim to provide reductive accounts of the social/cultural without taking much account of what social and cultural dimensions of existence are about, I see neuro-reductive cognitive sciences as the most dangerous kind of vortex – one close by, and one whose power has the potential to suck up and pull disciplines like history and anthropology into itself, destroying them as it does so.’

The neuro-reductionism of the neurosciences, with the imaging potential with the development of fMRI, combine to make a peculiar situation. A body of scholarship that believes the activity of the brain to be determinant of all human activity now able to perceive this determining activity on a register closer to its “real” surface than ever before. A lock now with its key.

This ability to ‘unlock’ the factors behind our behaviours (and therefore the implicit ability to shape them) has been very seductive to governments over the past two decades (Pykett, 2013). The ability to ‘nudge’ citizens into making the correct choices, becoming responsible for their own welfare, matched with minimal cost to the state

and maintaining suitable deniability to accusations of paternalism Pykett, 2012). It is within this context of neuro-reductionism that it becomes clear why these quotes from Foresight above became available to the project, and how meliorism permeated the whole affair.

The meliorism of scientific practices was able to come to the fore because the centring of brain science as the solution to the perceived problems of drugs in society. The archive is replete with examples of meliorism and hope:

It is possible that such an advance could usher in a new era of drug use without addiction. (Executive Summary)

Over the next 20 years the genetic causes of addiction will become clearer, medical treatments could be tailored to suit an individual's addiction risk, and brain enhancing drugs could become more widely used. (Foresight press release)

There are certain to be significant advances in science in the coming 20 years, the timescale of this project. (Horizon Scan)

Future possibilities are exciting and numerous. (AMS Report Summary)

BSAD Member, 50:57: I mean we did have some really science-fictional discussions about the future of the brain, would you be able to, you know, download your brain into a chip and reload it if you have a motorbike accident or something like this. Which by the way, is not going to happen.

And this was particularly so regarding cognition enhancers. Notably, there are fewer instances of meliorism from the later stages of the case study genealogy.

For meliorism to circulate, it requires terrain in which the future is open to exploration and predictions. This is as much the case in scientific practices where 'novel technologies and fundamental changes in scientific principle do not substantively pre-exist themselves, except and only in terms of the imaginings, expectations and visions that have shaped their potential' (Borup et al., 2006: 285). Meliorism operated through the Foresight project, as indicated by the quotes above, and the significance of this in terms of cognition enhancers occurs in how the 'imaginings, expectations and visions' of cognition enhancers shaped their potential to be seen as something capable of radically altering the structure of society, made explicit in the futures scenarios.

## Future Scenarios

Meliorism did not emerge solely out of the requirement to consider the future in 20 years. There was a political purpose to it also:

BSAD Member, 13:35: The challenge of the futurist is, if I tell you the future is going to be different tomorrow to today you say 'no it's not', you say 'no, of course the future isn't going to change, of course Britain will always be in Europe, of course the Berlin Wall will never come down, of course we'll never have,' you know? So you can go through a whole range of things which now seem obvious but [...] if you tell them the future will be different they'll say 'no, don't believe you' and if you say it's going to be the same as today, they'll say 'well, yeah okay but why did I pay you money to tell me the future is going to be that same as today?' So the difficulty with any futures work is how do you persuade people that what you have said is going to change is something you should act on today? Because you don't have evidence.

As part of this persuasion was the commissioning of State of Science reviews. The reviews, covering topics such as neuroimaging, cognition enhancers, gambling addiction, drug testing, history, sociology, and others 'were produced by leading scientists in the fields. Each of these reviews looked at the current understanding of the science and also what future capabilities science might offer' (Foresight Executive Summary). From the early statements of the commissioning of the State of Science reviews, contributors (as a whole) were 'encouraged to highlight some recent/exciting studies/pieces of science that should be recently published or in press' (Foresight minutes). The notion that academics need to court excitement is returned to in Chapter 7 with regard to 'Academia as a Vocation'. However, at this stage in the genealogy of cognition enhancers on the UK policy agenda, of relevance is how meliorism was productive of cognition enhancers and imagined citizens in the futures scenarios.

The futures scenarios were one of the outputs of the Foresight project, visions of potential futures that could demonstrate some of the policy challenges the UK faced. To develop these, Foresight organised a review workshop, where all the State of Science Review authors were invited to present their key findings. After the presentations, attendees workshopped the development of potential future scenarios. To aid in this, a 'visionary' in horizon scanning had been contracted to brief the



Project Management Group a few days earlier, highlighting that ‘dissonance is good on driving things forward’ (Foresight minutes). Two companies were contracted for the development of the actual scenarios. In explaining how futures scenarios would be developed they ‘stressed that all drivers would be taken into account, but those with the highest uncertainty and the highest potential impact would be concentrated on’ (Foresight minutes). For those involved with the Foresight project, cognition enhancers most certainly held ‘the highest uncertainty and the highest potential impact’.

The scenarios were developed through the use of ‘axes of uncertainty’. Early on, there were a number of axes and factors, including a ‘harm based vs. non-harm-based approach’, ‘individual rights vs. social responsibility’, and ‘social cohesion’ (Foresight minutes). These were to be cut down to create a scenario matrix.

‘The scenario matrix is a 2x2 schematic that defines the main parameters of the scenarios. It is constructed by juxtaposing the two axes of uncertainty that reflect the most important uncertainties, offer the most insight, or provide the most intriguing glimpse of the future’ (Foresight document).

The two axes chosen in the end were ‘life enhancement vs. life preservation’ and ‘evidence-based regulation view-based regulation’. The choosing of these two axes is significant in that the former axis implicitly refers to cognition enhancers.

The question of evidence-based regulation versus view-based regulation picks up the sentiment discussed in Chapter 1 with regard to the fact that, for most in the field, the current system of drug policy is considered a failure, in need of evidence to make it become rational; ‘view-based regulation describes an apparently arbitrary, historic, moralistic and non-science-based policy approach to psychoactive substance control’ (Foresight document). The inclusion of this axis can be accounted for by this contestation over how drug policy should be informed, being a central concern for the field. This position would also have had a strong advocate from within the Project Management Group with one expert member being particularly vocal:

BSAD Member, 23:01: I think none of us realis(ed), none of us could have thought that government could continue on a, it’s self-destructive strategy with drugs. I mean I think we all thought eventually, you know, science was going to win.

What is also telling of the underlying assumptions of the evidence-based versus view-based dynamic is that the two scenarios where evidence-based regulation materialises

the future is quite positive, whilst the view-based scenarios are negative. It is an alignment of the policy-makers with an imagined citizenship where both carry positive connotations.

It would have been for similar reasons that the scenario matrix could have been formed by the harm based versus non-harm-based approach axis. The harm-axis, as with evidence versus views, has a long-standing history in the field of drug policy (Tammi & Hurme, 2007). Whilst there is clear synergy, it is not necessarily the case that one side of the harm-axis maps to one side of the regulation-axis. For example, harm-reduction has overcome view-based such as with needle exchange in the HIV/AIDS epidemic of the 1980s (Yates, 2002: 117-120) and abstinence could be advanced in an evidence-based system, akin to cigarette regulation today. But it was the enhancement-preservation axis that was chosen.

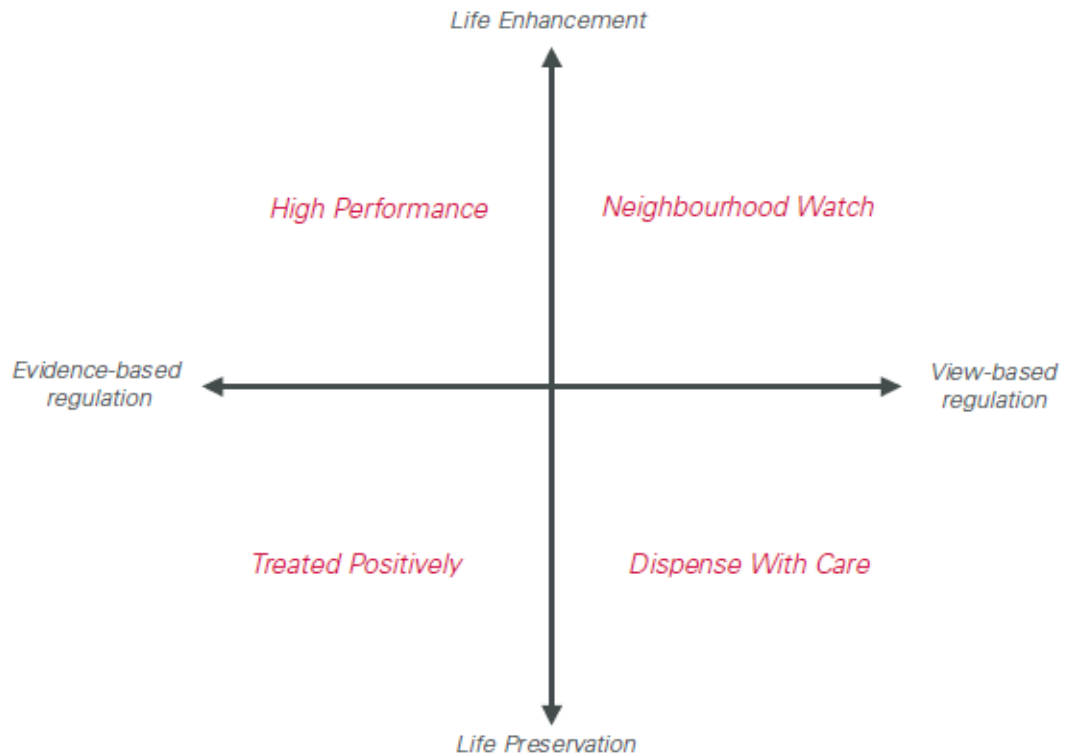
The inclusion of the life enhancement versus life preservation is interesting in that it does not have a history as a concern over drugs of addiction. The axis was explained as:

**‘Life enhancement ↔ Life preservation** describes the basis for psychoactive substance use. The axis relates to the views of the individual, community or society. At one extreme, life enhancement involves continuous modification of mood and behaviour. It may also include faster transition to medicalisation and more regulatory, market, or cultural adaptation to non-medical uses. At the other extreme, life preservation includes all psychoactive substance use for therapeutic conditions. The axis provides a certain degree of flexibility about what is classed as a disease, which may change over time’ (Foresight document).

What is of particular interest is that this axis only has relevance in relation to the question of cognition enhancers. In selecting this axis, there is the implication of a background to cognition enhancers that infers an identification of them with something that is potentially able to change society.

The 2x2 matrix was used to formulate four scenarios (see Figure 2). Cognition enhancers were largely discussed in terms that centred on them being widely used. In three of the four scenarios, cognition enhancers were considered to be widespread and their use largely unproblematic. In the fourth, Neighbourhood Watch, there was concern about cognition enhancer use leading to recreational drug use. In the Neighbourhood Watch, Dispense With Care, and Treated Positively scenarios,

cognition enhancers get little more than passing references. It is within the High-Performance scenario that the implications of cognition enhancers use are explored in more depth.



**Figure 2 - The scenario matrix (Foresight)**

The notable scenario of ‘High Performance’ is one in which UK society has become characterised by its use of cognition enhancers, and subsequently the UK has become an attractive location on a global scale. Within this scenario we see society adopting the beliefs of the scientific experts of the BSAD Project Management Group, the identity of the citizenship is similarly linked with the increased use of cognition enhancers. High Performance is particularly utopian, with the UK radically adopting the benefits of science, its imagined citizenship being an idealised, highly productive and creative workforce, enabled largely by the use of cognition enhancers. It is within this scenario that there is a clear alignment and support between the identities of the policy-makers, imagined citizenship, and cognition enhancers.

### **Ambivalence and Unlikely Futures**

But did cognition enhancers warrant such a significant importance within this scenario or to have an axis that inherently made reference to them? Whilst cognition enhancers

were able to be identified quite strongly with circulations of meliorism in the scenarios, interacting together with the identity of imagined citizens to produce utopian images of a potential future, the identity of cognition enhancers within the wider Foresight project was less stable. Analysis of the documentation of cognition enhancers and of interviews indicates that there was contestation over the identity of cognition enhancers; were they really this amazing ‘new breed of drugs’ or were they a rather more mute object? Above I have inferred that cognition enhancers inclusion in the Foresight project could easily have not occurred – but previously I have indicated that to criticise their inclusion from the position of hindsight runs the risk of perpetrating a ‘historical absurdity’ (Chapter 3). However, there is one very jarring and damning document which, could have justified the dismissing of cognition enhancers as an object of interest almost completely: a survey of the pharmaceutical industry. This contestation over the identity of cognition enhancers further highlights their interaction with the identity of policy-makers.

As part of the Foresight project, a survey of the pharmaceutical industry to understand their expectations of the future of psychoactive substances that would be discovered over the next 20 years was commissioned. The report found that, although there was ‘optimism that drugs to enhance executive function... will be discovered’, there was little to indicate that companies were actually interested in developing them. The Horizon Scan, as the principle public facing document, took a more certain approach about the likelihood of cognition enhancers, as demonstrated in the two following extracts:

‘Many people are likely to use over-the-counter remedies with psychoactive effects such as herbal stimulants, tonics and caffeine, to improve performance at work or in school.

‘Cognition-enhancing drugs will probably be developed for therapeutic purposes, but use of these drugs may well spread to the enhancement of the healthy, and their effects could influence many aspects of mental functioning, including performance, mood, cognition, pleasure and sexual performance’ (Horizon Scan)

‘Several respondents [pharmaceutical companies] felt that cognition and attention enhancers might be available in ten years, but this implies that the industry is currently working on drugs for strictly non-medical purposes, which is certainly not the case’ (Perspective of the pharmaceutical industry).

The survey of the pharmaceutical industry found there was no real appetite for developing cognition enhancers, which raises a question for the horizon scanning activities and the scenarios; where exactly were these cognition enhancers going to come from?

Ambivalence regarding cognition enhancers was most clear at the review workshop in the October of 2004, 15 months after the project had started. Held at the Royal Society of Arts, all the State of Science Review authors were invited to give a 10-minute presentation of their review. The cognition enhancer State of Science Review was not overly optimistic for the future of cognition enhancers, noting the troubles with animal models and translation. At the end of the presentation, although generally well received:

‘it was suggested that [presenter] was saying, with notable exceptions, that there was not going to be a major degree of success with cognition enhancement. [They] agreed, and there were no more questions. [...Although there were those who] seemed very keen to promote their extensive research in modafinil as a successful CE’ (email, Workshop Attendee).

This support for cognition enhancers once again can be seen as aligning with the commitments and investments of some members, which constitute a specific identification, and conversely, there was a lack of support from those members who had little or no professional investments in cognition enhancers; and by investment, I mean at the level of identity.

These multiple investments and diverging identities of cognition enhancers can be read in how the evidence of the pharmaceutical industry survey was engaged with. Whilst the quote from the pharmaceutical industry report made it quite explicit that cognition enhancers were not being developed, and therefore the implication that it was unlikely for them to appear on the market in the near to medium future, it was not necessarily read in this way. As one interviewee put it:

BSAD Member, 07:39: [the perspective of the pharmaceutical industry] was, I think very much misunderstood. A lot of people felt that the drug companies had all these drugs, sitting in a cellar somewhere waiting for public opinion or legal opinion to change so they could flood the market with cognition enhancers, but no one was actually working on cognition enhancers.

Given that cognition enhancers had been invested with so much meliorism through the project, it is understandable that some at the review workshop were disappointed by the pharmaceutical industry survey:

Workshop Attendee, 31:55: I got the impression they were slightly disappointed that there wasn't more going on to actually see whether we could actually make the country smarter, and not out of you know, not necessarily for malicious reasons, but.

ARB, 32:10: No, no, no. Because, well for me, reading through the Foresight report, all of it together, and you read the erm, the scenarios - did you see the scenarios?

Workshop Attendee, 32:26: I went to some meetings on,

ARB, 23:30: What did you make of them?

Workshop Attendee, 32:31: It was a very strange meeting. Yeah, there was erm, that was the, that was the Home Office organised these things. It was very odd. I can't remember what came out of it in the end, but,

ARB, 32:44: erm,

Workshop Attendee, 32:45: various futures.

ARB, 32:47: Yeah, well one of the, so they came out with four scenarios, I can't really remember three of them, because they're not focused on cognition enhancers, but the cognition enhancer one, or the one that discusses cognition enhancers, ends up say that by like, 2025, we'll all be taking them, it's going to be a wonderful world, it's got a bizarre history timeline which involves the king giving a speech in like 1918 [sic] or something like that. It's very peculiar in terms of that.

Workshop Attendee, 33:18: Again I think it was a, I was there with other people from the pharmaceutical industry and I think we made clear it was a misunderstanding what the pharmaceutical industry is doing. Cause I remember having a conversation there with a colleague from [a pharmaceutical company], and this woman was saying 'yes but you drug companies, you have all these drugs,' you know 'on the shelves' basically waiting for the government to change the rules about cognition enhancement and we said 'no', you know, we said it doesn't work that way, [the pharmaceutical companies] don't do that, [they] don't have drugs lined up waiting for a change in, [they]'ve got better things to do than that.

[...]

Workshop Attendee, 33:58: [...] Clearly there was a perception, that, there was clearly a misperception that the pharmaceutical industry was really quite interested in this, and I don't think that's changed honestly. It's too dangerous, the reputational damage, it's just, when you think about it this is business of risks and harms and the rest of it, and drug companies have, well, there was a time maybe into the 90s where they would, deliberately stay away from anything that might be regarded as lifestyle.

From the exchange between the Workshop Attendee's colleague from pharmaceutical company and another attendee at the workshop, we see how emotion (hope and disappointment) animated around the identity of cognition enhancers. So much of the identity of some policy-makers involved had become attached to cognition enhancers, which in turn were invested with given identities. The suggestion that the identity of cognition enhancers was not what it was being held up to be was met with disappointment and a denial. A positive reading of cognition enhancers needed to be maintained, but by drawing on different information.

The negative reading of cognition enhancers from the Perspective from the Pharmaceutical Industry was not universal:

BSAD Member, 40:49: Oh, okay, so you have to be careful about that, because [the pharmaceutical industry survey] asked a series of questions and he asked, I seem to remember it, the question was 'when might you' one of them was 'when might these things happen' and so if you look in the near term, one of the conclusions was nothing's likely to happen in the near term, but I think over the long term he did think that these sorts of things could happen and change.

The dual perspectives of cognition enhancers being just on the horizon, ready to go and simply waiting for the right moment, and the context that 'no one was actually working on cognition enhancers' points to an ambivalence that circulated behind the hope-filled statements that made it to the fore in the Foresight executive summary, scenarios and press releases. By ambivalence, I mean that beneath the surface of the projects which produced a coherent identity of cognition enhancers, there was an

assortment of mixed and contradictory feelings over their identifications and their potential. This ambivalence was present during other parts of the Foresight project also; '[Foresight member]'s famous opinion that 'none of them is more useful than an espresso' or something' (interview, BSAD Member: 50:57).

BSAD Member, 27:07: [...] they fall into this, as you say, they're sort of at the, they're an edge phenomenon. a) they weren't, they're more conceptual than proven cause we're not, I mean I don't know, have we got any cognition enhancers? Still I don't know if we have or not.

Despite the stark picture one could be left with as a result of the perspective from the pharmaceutical industry and the 'Cognition Enhancer' State of Science Review, it is clear that cognition enhancers were taken seriously during the Foresight project. What can be seen here is that this was a case of 'decision first, rationalisation later' (Flyvbjerg, 1998 [1991]: 29-35): at some point early on it was decided that cognition enhancers were of relevance to the Foresight project, the necessity for it to be included being weak but it came to be seen as an obvious inclusion. This decision and reasoning was maintained in the face of significant and even openly discussed factors which pointed largely to cognition enhancers being something that would be very unlikely to occur in the 20 years from when the project was convened. The excitement and necessity to present an image of a future society significantly changed, and provided the conditions in which hope operated to place value on some factors (the 'life enhancement vs. life preservation' axis), yet others could be seen as not being as important (the pharmaceutical survey). The particularities of which different factors came to gain prominence or not, and how they got played out, is a result of the organising principle of identity within policy-making between various subjects and objects.

### ***Drugs Futures, 2025?***

The project came to a close and the report was released in July 2005. As one attendee at the launch of the *Drugs Futures, 2025?* report said; 'I remember attending the launch of *Drugs Futures 2025* and all the talk being around cognitive enhancers' (email). Cognition enhancers, despite the ambivalence that circulated around them, were able to come to the fore. This reveals the productive force of emotions in the alignment of identity. It is clear how the emotions of hope and uncertainty circulated



around the potential identity of the society that was possible in the future. The image of the irrational society where drugs were not treated as a harm to be managed was definitively negative, whilst the rational, productive one with cognition enhancers widespread was given great positive weight. We see in this the mixture of emotions and the imagined citizenship. Here the policy actors were able to identify images of the potential subjects that could come into being with the correct policy actions. This stage of the case study genealogy shows most clearly how the imagined citizenship inform policy processes. In the next two chapters I will show how the identity of policy-makers, and how the identity of cognition enhancers came to play their part in the genealogy of cognition enhancers on the UK policy agenda.

The Foresight project had been a massive endeavour. It brought together, including the three science experts,

‘over 100 other specialists writing reviews of the state of the art in their field, participating in futures workshops, or advising [the Foresight project team] as members of the project’s steering group.

‘Group members ranged from an assistant commissioner of the Metropolitan Police to research council chief executives. Perhaps most significantly, the project involved the general public, whom we consulted about their views on the future prospects for licit and illicit drugs’. (Press article written by Foresight project member)

It cost roughly £540,000 (Freedom of Information Request, FOI2016/34415).

In the space of just under five years, cognition enhancers had emerged from almost complete obscurity to take an almost central location. This trajectory demonstrates the contingencies involved, the way emotions motivate investments in particular objects and futures, and how decisions were made that closed off the possibilities of other decisions. Cognition enhancers could very easily have not entered the purview of the Foresight project. Occurring by chance because people kept mentioning them: ‘this on-going muttering’ (interview: 05:05). However they were not necessarily something that should have been included, even with this in mind, as one interviewee (email) put it: ‘I also recall thinking that the rest of the reviews were generally about addiction, so [cognition enhancers] was a bit of an outlier’.

Cognition enhancers could have been excluded because they were not drugs of addiction, although they use similar interfaces. Or with the cognition enhancers review suggesting that they ‘were not likely to be, in the foreseeable future, that much

more effective than other techniques to enhance performance’ (email). Or the survey stating these drugs were not being developed. However, the demands of significantly different futures, and the excitement behind them, resulted in cognition enhancer being included and what is more, becoming a central aspect to the project outcomes.

Hope underpinned this period: hope for a better future, hope for more rational policies, hope for ‘quite cleverly designed’ drugs, hope for what cognition enhancers could possibly entail. These were tempered by other feelings, ambivalence circulated through the project especially in regard to cognition enhancers, but the hope of meliorism shaped the direction the project took. The positive feelings of the project certainly had an impact on those involved:

BSAD Member, 48:26: Well, [other Foresight project member], has since told me that he had not particularly been involved in the policy machine, it was as a result of, what he found a rather positive experience with this whole thing that he, got involved in more detail [...] but he was saying, that basically it was the experience of the Foresight project that made him get interested in, and think he could do something useful via being involved in the government policy machine. Yeah.

Positive emotions continue to play their part in the rest of the genealogy of this case study. However, the balance between positive and negative emotions shifts over the next two stages. As we will see in the next chapter, when the agenda was passed to the Academy of Medical Sciences, disappointment played a more suturing role, and with passing onto the Advisory Council for the Misuse of Drugs, apathy.

## **Summary**

The Foresight project period of cognition enhancers being in the UK policy demonstrates that – even though it was fully evidenced-based – rationality alone cannot explain why the policy activities took on the specific forms that they did. To be clear, at no point am I implying that it was wrong for cognition enhancers to emerge within this project, or that they did so because of faulty evidence or bias by anyone involved. What I am suggesting is something much more interesting about the nature of policy-making. Evidence was used throughout, and properly so, however this does not result in a deterministic logic for if cognition enhancers should have been included in the Foresight project or not. The fact they were included points towards the role of identity in policy-making.

The identity of the policy-makers (as experts of neuro-science, a number with specific interest around cognition enhancers) coincided with proactive reconsideration of the potential identity of the imagined citizenship. This resulted in the emergence of cognition enhancers on the UK policy agenda in the activities of the Foresight project. The imaginings of the potential future citizenship were in turn inflected by tensions over the identity of cognition enhancers. They were variously considered as a potential transformative object with major implications for society, whilst at the same time came up against identifications of something that would likely have little impact on society. These two identities of cognition enhancers were themselves produced in interaction by various members of the project who occupied differing identities.

Cognition enhancers emerged in the Foresight project not because they were an obvious topic of inclusion, as appears in post-facto explanations, but because situated within the policy-making apparatus were a small number of individuals whose academic positions (their identities) were linked to early research on cognition enhancers. Such that the 'kept mentioning' was able to become of major importance within the project to the extent that by some accounts cognition enhancers were one instigating concern for the project itself. The movement from being mentioned to becoming a leading focus was possible because of how cognition enhancers were identified as aligning with meliorism over the future, both of science and policy, and how cognition enhancers became understood as enabling a future where society was to similarly become idealised. A mutual relation of production occurred in the formation of the futures scenarios, where cognition enhancers were identified with (rational, evidence-based) society. Here the identity of cognition enhancers co-formed with that of the identity of an imagined future citizenship: one shapes an understanding an understanding of the other, that understanding thus becoming an identifying characteristic of the former.

As will become clearer over the rest of Part III, there is a relationship between the hope for meliorism and the distance to the horizon which was being considered within these three periods. The Foresight project was asked to consider the future of drugs, looking 20 years into the future. This provided the largest scope for meliorism and for hope to be allowed to animate the conversations, this despite a considerable amount of evidence to suggest that the visions being portrayed were unlikely. The Academy of Medical Sciences review had a much less forward-looking remit, although what

their remit was would be unclear to those involved, and we see a much more measured tone in terms of expectations and hopes of what can be achieved regarding cognition enhancers. By the time it gets to the ACMD Cognition Enhancer Working Groups and where it goes after that to the Independent Scientific Committee on Drugs, is a consideration almost completely without a vision of the future. At that point all meliorism and hope for the future is gone and the vitality for it has dispersed. In the next chapter, the genealogy moves to the Academy of Medical Sciences period, where the variegated identity of policy-makers and the imagined citizenship are considered further.

## 6. Academy of Medical Sciences

### Introduction

In the previous chapter I demonstrated how the identities of policy-makers, imagined citizens, and objects (specifically cognition enhancers) interacted with one another during the Foresight's BSAD project. This involved an analysis of the work of hope in the form of meliorism in the practices of science and policy-making, and how imaginings of hope-filled futures produced supportive alignments between the three elements. Towards the end of the last chapter I traced that cognition enhancers' identity was not singular, with an ambivalence between an identification as something clearly on the horizon and as something unlikely to reach materiality. Cognition enhancers' ambivalent identity points towards the variegated nature of identity as the organising principle between policy-makers, imagined citizens, and objects, which operates above rationality and evidence. This chapter continues the analysis of how the interaction of identity is productive of policy, but also further explores the variegated dynamics of identity. In this chapter, I trace cognition enhancers' trajectory from meliorism-filled object to premature concern.

The work of the Foresight project was picked up by a number of other organisations. These organisations included the Beckley Foundation, Demos, the Nuffield Council on Bioethics, the Royal Society of Arts, and the Transform Drug Policy Foundation (TDPF, or simply 'Transform'). The work of the latter is notable because it resulted in the publication of *After the War on Drugs: Blueprint for Regulation* (TDPF, 2009), providing a detailed guide of different systems of regulation that could be applied to drugs that would minimise harm to society and the individual. *Blueprint for Regulation* is interesting because it provides a glimpse of what the Academy of Medical Sciences could have put forward if these possibilities were not – as will be shown – foreclosed. In tracing this genealogy, I have chosen not to follow these other paths because they were less aligned to the social policy-making interface, nor do they address the substantive topic of cognition enhancers in particular detail.

In tracing this stage of the genealogy, I will focus on the changing identity of cognition enhancers from the Foresight project through the Academy's review. This will begin with a consideration of how certain possibilities were foreclosed from the review's consideration, limiting the potential identities of the imagined citizenship that had

been developed in the previous Foresight project. Then the public dialogue of the Academy's review will be explored to consider how cognition enhancers were framed to produce scepticism, but remain so far outside the public's frame of reference for support for cognition enhancers' use to be generated, which also indicates the different identities of drugs for the public and the scientific experts *qua* policy-makers. This returns to the recurring tensions over the identity of cognition enhancers within the policy-making apparatus. Finally, I close with a discussion of how policy documents work to conceal the relational, discursive, affective, social, and cultural dynamics of policy-makers. These aspects further demonstrate the organising principle of identity between policy-makers, imagined citizens, and objects, which operates above rationality and evidence.

The Foresight project set out 18 strategic decisions what needed to be made by the government, 7 were in regard to medicines, 9 for 'so-called "recreational" psychoactive substances', and only 2 for cognition enhancers. Evaluations of Foresight projects were usually done in the form of an internal review conducted a year after the completion of the project. The Foresight project had cost approximately £540,000, in its 1-year review it was considered that 'the work represented good value for money [and]... the project met all of its objectives [with its contribution]... to debates on the relationship between cognition enhancement and education' being among its key conclusions. By this assessment, it would appear that the Foresight project was a success. However, it was to ultimately have little effect on government.

BSAD Member, interview, 02:27: It had zero impact on government.  
Government are terrified about drugs. They don't understand  
drugs and they will resist because it is a difficult thing to do.

In part this was due to the constraints placed on the Academy's review that restricted what possibilities it was allowed to consider.

To understand why the Foresight report ended up having little effect on the government despite it being evaluated in generally positive terms, we need to turn to what happened in the Academy's review. The purpose of the Academy of Medical Sciences' review was, according to the one-year review, 'to consider how to respond to the strategic choices' made by Foresight. As was made clear from the futures scenarios, Foresight had openly discussed the potential for reform of drug policy, and it was the basis of the evidence-based regulation versus view-based regulation axis.

With this in mind, the Academy could navigate the strategic choices and could have proposed racial reform. In the end, the AMS's proposals were, although still progressive and with suggestions such as injection clinics, for example, rather less radical. What occurred was that the scope for the Working Group that had been tasked with conducting the review to explore these possibilities were foreclosed throughout the project.

Part of this foreclosing can be seen in the fact that the Foresight project was given over to the Academy for review itself. At this time, it was not common for Foresight projects to go to external review. In trying to trace a genealogy, the question of why the Academy of Medical Sciences was asked to review this Foresight project in particular is one that struggled to be answered. Some recount that it was because of the vast amounts of information involved, and that the Department of Health (which was given the Foresight project) simply did not know what to do with the Foresight report (interview, BSAD Member: 37:37). It was also suggested that the review was sought to corroborate the findings of the Foresight project:

BSAD Member, interview, 46:20: [...] I mean I think the idea that was had, by whoever it was to seek their corroboration for what was being said, probably was a valid one, actually, it might seem a little cowardly but that's sort of politics really. [...]

A more cynical account however is that the passing on of the Foresight project to review was so that some of the suggestions which the government was 'terrified about' could be ignored and kicked into the long grass.

## **Political Constraints**

Being kicked into the long grass can be seen with how political constraints were placed over the AMS review. Of course, this was not how the problem was presented to those involved in the review.

Working Group Member, interview, 55:17: [...] this is the letter of invitation, [...] 'Ministers are anxious not to lose the momentum generated by the Foresight study and are keen to ensure that robust policy advice is drawn down into relevant government departments as soon as possible, [...]  
(emphasis added)

Working Group Member, interview, 12:00: [...] I knew, right at the start that there were three domains in which they were looking to follow on: recreational drug use you know mental health and enhancement. [...] and [the Chair of the AMS Review] said to me that '*governmental interest in this couldn't be really at a higher level*' that [the] Cabinet Office was interested in this, and, so that was [...] my sense of what we were about.  
(emphasis added)

A working group was put together, made up of scientists with various backgrounds, psychologists, a philosopher, a lawyer, and an epidemiologist, and they were given the following terms of reference:

The remit of the Working Group is to:

Consider, in consultation with experts and the public, the societal, health, safety and environmental issues raised in the Foresight report *Drugs Futures 2025?*. Report back to the Department of Health and other Government Stakeholder Departments with recommendations for public policy and research needs.

In the course of the consultation, consider the Government's policy priorities in this area. (AMS report)

In the Foresight project imagined-potentials of the imagined citizenship were used as tools to explore the strategic choices that faced the UK government over the next 20 years. The four distinct scenarios that were produced generated articulations of the imagined citizenship that would be produced if different paths were taken. The most positive ones, including the cognition enhancer-centric High-Performance scenario, were those where society conformed to a logic that the scientific experts (as policy-makers) also identified with. The Academy's review, therefore, being tasked to review the strategic choices of the Foresight project, were in a position to consider the policy option required to make these possible. However, it was made clear to members of the Working Group that certain considerations were not going to be entertained.

Working Group Member, interview, 04:56: [...] It was one of the first things that we were told on the committee, 'that the minister does not want to hear *anything* about the legalisation of drugs'.

ARB, 05:10: Oh wow, that's really fascinating.

Working Group Member, 05:12: Which considering that I thought that's what we were largely being asked, (laughing from both) so I went



into with quite a lot of hopes, and then there was a progressive diminish.  
(emphasis in original)

Although some were not given the message as clearly, but similarly understood that these considerations were generally off the table:

Working Group Member, interview, 21:23: [...] yes we did have conversations about whether there could a more effective and efficient regulatory approach to drugs use [but] there was nothing that we wanted to say there that was *new*. [...] Well I mean, this is something you hear all the time [...], not because of the working party but because it's an obvious thing to say that 'surely there must be a better way'. [...] No I mean I didn't get the message that the minister didn't want to hear this, but whether the Academy of Medical Sciences wanted to pitch itself into \*that\* battle on recreational drug use, that probably wasn't what it thought it was about taking this work on. [...] If you had wanted to set up a Working Party on recreational drug use and nothing else I'm not sure that, that our Working Party was the one that would have been set up, and I don't think it would have been in the Academy of Medical Sciences.

Foreclosing the possibility to consider regulatory change occurring can be understood, as per the above quote, by the fact that if the government wanted, such a project would not be tasked with the Academy of Medical Sciences.

However, that did not mean that the Working Group did not engage in these conversations. Members of the Working Group viewed 'the subcontracting of [the review] as a continuation of the work that been started in Foresight so [it was] a kind of extension of it' (interview, Working Group Member: 25:57). The documentation from the Foresight project did put in place the debates about reform – 'In the future there could be increasing expectation that the regulatory structure for 'recreational' psychoactive substances matches our understanding of their harms' (Foresight document) – so it was something that the Working Group would have at least had to consider. Also at the time there was a much wider public debate ongoing around the same question.

Working Group Member, interview, 05:58: [...] there had recently been a Lancet report, an important erm, an Adelphi study where it had

been shown that, at least according to the Adelphi view, which is not proper research but opinion, that the harms of tobacco and alcohol were much more significant than the harms of most illegal drugs. There was quite a famous bar chart, you had the left hand side heroin, maybe cocaine, and a few other substances then tobacco and alcohol, and then quite a bit further down cannabis, ecstasy, LSD, and so on. And so a lot of the attention was on, first of all what are the harms of these different drugs because that was just an opinion rather than scientific study.

I mean now I remember [the Working Group Chair] saying that he was looking up in all the medical text books he could find about what, what is the harm of taking heroin, and he could find a lot of stuff about opportunistic infections, he could find a lot about overdose, but he could hardly find anything about what would go wrong if you took the regular dose in a clean, safe way. So it's quite interesting, cause there just didn't seem to be the evidence-base for harm that underpinned the regulations and when he started looked at the harms when these things could be found there was not much correlation between the harms and the regulations. We tried to puzzle our way through that, cause for the scientists it was very disturbing, for [myself] it was also rather worrying that we seemed to be regulating drugs on the basis of moral panic and anecdote rather than anything that had a scientific basis. And of course this was a time that [Chair of the ACMD] was writing papers, and getting into a lot of trouble as well, for making that argument. [...]

The Working Group did spend a lot of time talking about the problem of drug policy, and the fact that the harm of drugs did not match up with the regulations. The important article in *The Lancet* mentioned in the previous extract – the same research that *The Independent* ran on its front page that I found on a bus – had created quite a stir in the drug policy field, providing as a useful talking point in much of the debate around drug policy and the necessity for reform. Given that this was the wider background of the discourse at the time, it is significant that the real possibility of alternative recommendations that could have been made by the Academy's review were foreclosed in the Workshop's discussions.

As demonstrated from the extracts above the membership of the Working Group, as scientists who were 'very disturbed' by the lack of scientific evidence informing policy, were in positions to challenge the current policy orthodoxy. Among these, the

Chair of the Working Group was particularly thwarted in wishing to look towards alternatives:

BSAD Member, interview, 38:27: [...] I think [the Chair of the AMS Working Group] was pleased to do it, I think he did a good job. But what was interesting, and this is where it did get political, in that cause he was particularly interested in chapters relating to drug policy and the failure of prohibition and the need for new policies. And his initial report, for the Academy, which I didn't see but I heard was very much supportive of the kind of view we took, which was we need a new policy we need to potentially to have some major review of the drug laws, royal commission etcetera. And he was pressured, heavily pressured to reduce, remove, or tone down his recommendations, so in the end they became really little more than saying this was a good report without actively campaigning for change so there was definitely pressure, political pressure put on him to, though. And of course Academy of Medical Sciences is in a weak position because it gets, it was getting its money to do this and a lot of its other money from the Department of Health. I think there was, it was senior members of the Academy who were told that were not, you know an anti-government approach would not be welcomed, and backed down in the end. Go on.

ARB, 40:18: I think the main, one of the things I've been told was told very early on was 'The government is', or 'The Minister is not interested in... [BSAD Member: 'hearing for the legalisation of drugs.'], ...'anything on the legalisation of drugs', something like that.

BSAD Member, 40:29: Correct, no that would have been, well it wasn't. Um, yes it was about, even, just more rational policies. Which is a pity. So I do recall he was quite in favour, he spoke to me about this, about how he you know he want(ed) he could see this as an opportunity for significant change. I mean emerging from the seminar, the [CUGPOP] seminar that you alluded to whenever that was and er, he was thwarted by some of the other scientists there, *supposed scientists* who decided it was better to, they would get their knighthoods more quickly if they complied with government policy that if they opposed it (ARB laughs at this)

BSAD Member, 41:17: That drives a lot, you have to, you know you laugh but it drives a huge, the medical establishment is, it's, in many ways its very archaic and they're very competitive and getting knighthoods is one of the few things they can do to make

themselves stand out from the others, so they're, senior doctors are extraordinarily pro-government for their own self(-), well not in just terms of these what we call post-nominals, you know; C.B.E and all, but also, the government affect you know can control say it can affect your promotion and things.  
(emphasis added)

I include from 40:18 in this exchange because it highlights those tensions between the domains of science and state-level politics. It is a very open and frank assessment of the field of science, and the way it contorts to political demands. The use of the phrase 'supposed scientists' is particularly revealing with it attesting to a perception of the proper conduct by which people in that position should be measured against, and that science should be free from politics. Science is, however, a social enterprise (Latour, 2007 [2005]). A microcosm of this occurring with the Academy of Medical Sciences review, if this account of the Chair of the Working Group's position is true. The way the Working Group's review was produced and recommendations made does mean that it is unlikely that a report as suggested in the quote was actually written. Rather, it would be more likely that the Chair of the Working Group would have wanted to use the opportunity of the review group to put forward such suggestions, with members of the working group generally sharing a level of scepticism of the government's current approach, and the public dialogue work showing the public's openness to potential reforms.

Whether it was a matter of ministerial intention or the Academy wishing to avoid the issue, is immaterial. The system functioned to close off the possibility for the review to pick up and push forth the Foresight project's more impactful recommendations.

[AMS member], very bright young man, but he, taking on a civil service approach, to tell us what he thought we needed to know. And he too thought that what we needed to know was that the minister had said ['that the minister does not want to hear *anything* about the legalisation of drug's] (Interview, Working Group Member: 06:23).

The selection of the Academy of Medical Sciences as the review body, and the constraints imposed on them, resulted in some visions of the future being foreclosed. With this, the identity of the imagined citizenship became delimited, the notion that Britain could become a nation with users of recreational drugs being so alien that it

became excluded as a matter of course. In contrast to the Foresight project, the imagined citizenship was to take on a different form in the AMS project. Whereas in Foresight the imagined citizenship was predominantly ideational, in the AMS review, members of the public were consulted to form the body of the imagined citizenship.

## **Public Dialogue**

The public dialogue was meant to be a major part of the Academy of Medical Sciences' review, being allocated the 'lion's share' (interview, Working Group Member: 13:50) of the budget. The public dialogue for the Academy was conducted by the same organisation specialising in consultation and planning, hereinafter called 'The Company'. This aspect of the case study is interesting for a number of reasons. Among them is that the future orientation of cognition enhancers became quite difficult to engage with for the public who do not have similar orientations to those with more scientific backgrounds who had been in charge of the processes so far. Whilst there was interest in cognition enhancers from the public, they approached them with far more scepticism. The public's lack of engagement can be seen as being disappointing for some of the Working Group, disappointment being a characterising emotion of this period.

The Company contracted to do the public dialogue split it into 5 themes: 'Drugs and the law'; 'Drugs and society'; 'Drugs for a smarter brain'; 'Drugs and young people'; 'Drugs and mental health'. There was a launch event, a 3.5-day deliberative workshop called 'Brainbox' which was split over two parts and covered all five topics, five one-day workshops (one dedicated each to the five specific topics, and one looking at the three categories of drugs with a user/ex-user group. 'In total, 727 people took part in this project (not including Consortium members, and expert speakers at workshops and Brainbox)' (AMS document).

The launch event was held at a venue commonly used for public science and launch events. In attendance were a mixture of members of the general public (some of whom had been recruited to attend), a small number of people representing local organisations, and about a fifth of were invited individuals, predominantly policy-makers and scientists (AMS document). Attendees were encouraged to share their views about each of the topics. It included a series of themed roundtable discussions, with experts from policy and science backgrounds participating in discussions as

much as the general public. Of note is that, of the five topics, cognition enhancers were given their own floor, where attendees could drop-in to the session ‘to talk with experts about new drugs on the horizon and try some more traditional methods of brain enhancement’ (Launch event leaflet).

The invitation to ‘try some more traditional methods of brain enhancement’ aligns with similar rhetoric that occurs within the bio-ethical and philosophical literature regarding cognition enhancement, in that it is working to identify the use of these drugs (and wider technologies) as being equivalent to more mundane activities. This identity work creates a distancing between cognition enhancers and recreational drugs, which works to legitimise cognition enhancers (see Chapter 4). However, this also ran alongside their framing as ‘drugs’ for a smarter brain, which also identifies them with recreational drugs. The dual identities of cognition enhancers (something mundane, but also drugs), resulted in a scepticism from those at the launch event, varying from a rejection of a distinction between different kinds of drugs and concern over how they might be used in future (video from event). Identity work occurs throughout policy-making, and the effects can be seen through the public dialogue.

The 1-day workshops conducted across the UK were generally undetailed in the narratives of my participants, but a few details do come through which provide an understanding of the relationship between the public dialogue to at least some of the members of the Academy’s Working Group. They reveal a distinctive difference in the understanding of the identity of drugs between those involved with the Working Group and the public.

Working Group Member, interview, 25:43: [...] the composition of the Working Party was quite sciencey [...] it really came home to me one time when, at one of the public engagements were feeding back [...]. I think it was in [location] where the participants were talking about the using of drugs for mental health. One of the issues was this. Suppose you were suffering from depression, and you were advised that one way of trying to get over this would be to take more exercise; just go to the gym and workout, be more active take more exercise; that will stimulate the brain in a way that will help you deal with depression. Would you rather deal with it that way or through a regime of drugs that would have precisely the same effect? The public view was very strongly in favour of doing it without the drugs, and when this came back into the Working Party, there were a who were very puzzled by

this. They just couldn't understand this. They said, '[but] that the drugs are doing exactly the same thing, that the pharmacological effect'.

Working Group Member, 27:57: [...] people who were from science backgrounds just viewing it through science lens, just couldn't understand why members of the public wouldn't see that this was so. [An] intelligent response to this might have been 'well, it doesn't really matter which I do because the outcome is going to be the same, so why prefer one rather than the other?' But it reflected a public suspicion of drugs, that there are side effects or that drug dependency is not a good thing. For my part, I didn't have a problem at all in seeing why some, in this a majority of, members of the public preferred to do it another way. But, this was a mystery to the, yeah. So it was a very sciencey kind of committee, Working Party.

The notion that the public has a suspicion of drugs points towards the issue of the identity of drugs. For those involved in the Academy Working Group, the identity of drugs is different to the identity that drugs had for the public:

Working Group Member, interview, 16:42: [...] it's an interesting issue when you discuss chemicals in the brain with the lay public because if you talk about enhancing their cognition by a drug they will often say 'oh I don't think I should do that', but if you talk about it by changing their diet they say, 'oh yes, that sounds like a good idea', even though it may be that same chemical change is involved. And it's all about the framing of what a drug is, you know, the drug, drugs have connotations, of illness, and obviously in this context of addiction. And no one wants to take an agent which maybe is addictive.

In this quote we have the identity of recreational drugs rubbing up against the identity of 'the public'. The two come into a relationship with one another, and their identities move as a result; firstly, there is the situating where drugs they currently reside with connotations of 'illness' and 'addiction', and secondly the possibility for 'framing' them differently which was ongoing in the Foresight project.

The identification of cognition enhancers in terms of drugs can be seen to have produced a negative response from the public in the public dialogue activities. As made clear in the previous quote, this framing was not the same for all the members of the Working Group, and is also indicated in an extract from another interview:

Working Group Member, interview, 32:48: [...] I'm coming at it from a particular kind of [disciplinary] perspective, and so, for me, the ethics would be about the individual's autonomy, the individual making their own autonomous choices about the kind of person they want to be. If enhancers help them to be, more the kind of person they want to be – maybe some people do want to feel better than well – then fine! [...]

The terminology of 'public dialogue' is important because this part of the Academy review was not simply a survey to gather public opinion, but intentionally to engage the public and gather their views (AMS document). The public dialogue framed cognition enhancers as 'drugs' and 'drugs for a smarter brain'. This is significant because this positioned them differently to how the Foresight project had framed them, which was in line with the scientific orientation noted within the AMS Working Group. Firstly, the Foresight project spent a lot of effort to refer to drugs as 'psychoactive substances' rather than 'drugs'. Secondly, for the members of the Foresight project, 'drugs' had different connotations to the negative ones that are held by the public.

To demonstrate this point, let us return to the quote from one of the members of the Foresight Project Management Group; cognition enhancers were situated differently, as potentially 'not drugs'; '...[cognition enhancers] were of interest because they were an area which, they were a boundary, they were a boundary zone. You know, were they drugs? Were they medicines? Were they good? Were they bad?' (interview: 13:22). This different framing provides different logics for the public; cognition enhancers shared an identity as (recreational) drugs and therefore became connected to those negative associations, whereas for the Working Group following from the Foresight project, cognition enhancers are psychoactive substances and therefore did not carry the same identity.

Once again there is a tension at play. Political constraints were placed on the Academy's review, with certain possibilities being foreclosed. Members of the Working Group were disturbed at the lack of evidence informing drug policy. However, the potential to suggest policy that aligned with their idealised logics informed from their identifications as scientists was firmly placed off the agenda. In the public dialogue, the imagined citizenship as envisioned by the public got to come



forward. In contrast, these contained far less engagement with future orientation. The possibility to engage with the same meliorism that had permeated the Foresight project simply was not available to the public. In this way, there was a foreclosing of the imaginings of the potential futures of society that were contained in the Foresight futures scenarios. For members of the public, this new category of drugs termed ‘cognition enhancers’ was as if to be of ‘another world’ due to being so far outside their frame of references.

Working Group Member, interview, 42:10: [...] as I say we got really good value from these people on recreational drug use, less so on mental health and almost nothing on cognition enhancers. [...]  
[...]

Working Group Member, 45:52: [There is a problem about] trying to facilitate this by giving people some sort of hypothetical scenario where the central players are using cognition enhancers for one thing or another. [If] not quite science-fiction, but it’s not part of the everyday reality. Unlike recreational drug use where you got the sense that everybody in [Location of the ‘Drugs and Law’ workshop] would have a view about this and were very well informed actually, at sort of street level, about what was going on. Whereas with cognition enhancers well *this was another world*, and they couldn’t really, I think, engage with it in the way that would give us something. It certainly didn’t elicit strong reactions one way or the other. If anything I suppose they were negative reactions, but they were just sort of, a bit suspicious, you know?  
(emphasis added)

Getting ‘really good value’ from the public in regard to recreational drugs was possible because for the members of the public involved with the public dialogue, there was a clear frame of reference by which to formulate opinions. Cognition enhancers were simply too far removed. The difference of orientation towards cognition enhancers between the meliorism that had circulated previously in the Foresight project, and the general position of the public is noticeable in the disappointment that one member of the Working Group indicated as a result of their public dialogue activities.

Working Group Member, interview, 09:53: Well, I think at the end of it I realised I was wrong to hope for too much from it. Because it was not an informed discussion. And obviously this was the first

time that citizens had heard about [cognition enhancers], and so it wasn't really to be expected they were going to get far in their thinking about it, so they, so my expectation had been over-high on that.

The public dialogue was not disappointing for all the members of the Working Group, although my interviews with members of the Group are peppered with indications of cynicism towards the public dialogue process; 'I mean it just all sounds [laughing], I just I'm afraid I didn't have much, ... It's just all, sort of New Labour sort of, glossy speak. ... Its Tony Blair personified really, isn't it? With his grin and his, you know?' (interview, Working Group Member: 63:36). Whilst the public did not have much to say in regard to cognition enhancers, they did for recreational drugs. Responses from the public dialogue towards recreational drugs did provide some hope:

AMS Review Contributor, interview, 43:31: [...] Because they did focus groups, that's the other thing they did. And that was the thing that changed [Chair of AMS Working Group], I remember him coming back to me and he was, [Chair] did focus groups and he realised that if you educated the public they would come round and then he thought 'I'll tell the government, look, what you've got to do is talk the people, and then everything will be alright,' and they just said; [gives two fingers] 'We know best, we don't care about the people' I think he was actually, he was saddened by the resistance, cause that was a Labour government you'd imagine they'd be moderately interested in the populous but no. More obsessed with what the *Daily Mail* is going to say.

In the last two quotes we see how the imagined citizenship alter the policy options that are deemed pursuable. In the first, we have a disappointment at the public being unready to consider cognition enhancers, and therefore the policy logic is to not continue. Whilst with the second, the imagined citizenship becomes one that is open to discussions of, and favourable towards, policy reform, which can then be pursued as a policy option. Unfortunately, whereas the public dialogue closed off some possibilities because the public were not future-orientated and did not share the meliorism towards cognition enhancers that was held within science, the possibilities the public did provide were closed off by the political constraints imposed already on the Working Group. Potential futures regarding recreation drugs were closed off as these futures did not match up with the imagined citizenship that the Working Group were in effect allowed to consider.

The public dialogue demonstrates how the identity work over drugs and the imagined citizenship was able to produce different policy logics. With both elements, their identities were not singular. Cognition enhancers were to share an identity with ‘traditional methods of brain enhancement’ yet also with recreational drugs. The imagined citizens came in the form of potentials of what kind of society would like to be created, but also in the form of those who attended the public dialogue. A large variegation of identity of each operated through the public dialogues. Similar variety over the identity of cognition enhancers also operated within the Working Group.

### **Recurring Tensions**

Cognition enhancers took on different identities for the public compared to those from the AMS Working Group. In the Foresight project, there was an on-going tension that circulated cognition enhancers concerning their identity. On the one hand, they were positioned by excitement surrounding them, something new which brought with it unknown possibilities, whilst on the other we had what could be described as an uncertainty towards these substances. This tension emerged because what cognition enhancers were had not become sedimented; that is, what they were had not been closed down and become naturalised, they were still open to contestation. At the time of the Academy’s review, cognition enhancers were still ongoing in this process of contestation, and arguably they still are. This is demonstrated in the accounts that I was able to collect from members of the Working Group.

In an interview extract included above, one member of the Working Group expressed their surprise at the insistence that the consideration of the legalisation of drugs was off the table given that is what they thought they were being asked to consider. There was some confusion as to why the Academy of Medical Sciences was being asked to review the Foresight project; ‘I must say I got a bit confused in the beginning, you know? Drug futures had done it, why are we doing it? You know, it seemed a bit, a sort of a replication’ (interview, Working Group Member: 50:33). It is in this context of a lack of clarity as to exactly the purpose of the Academy’s review, which I argue was in part to constrain the possibilities of the recommendations, which the members of the working party had to negotiate the relationship between the three categories of drugs which the Foresight project had distinguished.

Working Group Member, interview, 13:50: [...] the three topics were quite unbalanced, in the sense that recreational drug use was a topic that had been done to death. I mean was there anything left to be said about this? Whereas, [drugs for] mental health, well that is a concern but that was coming from another angle. And then there were cognition enhancers which were at the leading edge of [the group's remit]: this was really where I think an urgency to respond was sensed.

For this member of the Working Group, the fact cognition enhancers were newly on the horizon is what gave the project its distinctive and interesting character, its 'leading edge'.

Whilst some other members did not necessarily feel that cognition enhancers were at the forefront of the Academy's review, there was the sentiment that they were an important and interesting aspect, worthy of consideration. However, the notion that cognition enhancers were an exciting part of the project was not necessarily shared by all members of the Working Group. The quote above stating that the policy interest in cognition enhancers was premature is a sentiment that emerges during this period and becomes more solid in the next stage. This can be seen in how for some cognition enhancers were considered 'a rather dull topic':

Working Group Member, interview, 05:58: [...] So the main topic really was recreational drugs, and cognition enhancers was a bit of a side issue for us. [...] So, cognition enhancers, erm, okay, so, I think the general thought was that the horizon scanning is a perilous business in many areas. So, if were doing horizon scanning in artificial intelligence or computer science, it's a complete mug's game, that no one can know what's happening in 10 years' time. However, for legally available pharmaceuticals, it's the opposite because they take so long to develop, so long to test that anything that was going to be available in 10 years' time would be at least, at some level, it would be known to the community now, it would be known that it was in testing and developing, and the general view was that this was a wr [wrong?], *cognition enhancers was a rather dull topic*, because there was only one or two things that really had any claim, I think Modafinil was already known and being used in some case, but there wasn't anything else I think coming through that we could say with any confidence 'yes, we've got to regulate this because it's going to be on the market in time.' So.  
(emphasis added)

A similar disappointment regarding cognition enhancers was felt as a result of the public engagement:

Working Group Member, interview, 44:10: [...] it was in my thinking beforehand, about cognitive enhancing, and I think because of that I hadn't realised it wasn't in anybody else's thinking. But I certainly thought by the end of the process that the whole thing was premature, and that we should have concentrated on misuse.

This quote captures the tensions of the project in regard to cognition enhancers; a mixture of positive sentiment with a feeling that the interest or concern was somewhat misplaced. It is the same ambivalence concerning the identity of cognition enhancers that permeated the Foresight project. On the one hand, there is the sense that cognition enhancers are part of this new horizon, one that could, potentially, revolutionise modern society. On the other, this horizon was considered so unlikely that it was not worth considering.

Of course, there is not always a consensus on the approach to what the science itself is saying. For example, this was a period when there was an emerging debate about the harm of cannabis, driven particularly by the developing of certain strands of cannabis which were stronger and often sold under the name of 'skunk' (Acevedo, 2007: 178). At the time, the scientific evidence that indicated that there was a significant increase in the risk of mental illness occurring as a result of the use of cannabis was starting to emerge (Boydell et al., 2007; Morrison & Murray, 2007), but common acceptance was with the ACMD (2005: 11) suggesting that 'for individuals, the current evidence suggests, at worst, that using cannabis increases the lifetime risk of developing schizophrenia by 1%'. This lack of consensus was also present in the Working Group:

Working Group Member, interview, 23:29: It's a tricky topic. And at that time I'd learnt from [a Professor of Psychiatry], who should have been on the group. I'd learnt from him about the, how toxic some kinds of cannabis could be, and I was trying to introduce that into the discussion I remember. But people were little bit thinking 'he's an old fashioned guy,'.

The identity work over objects done by the Working Group, whether that be of recreational drugs or cognition enhancers, occurred through an interaction of the variety of identifications the policy-makers invested themselves in, resulting in

various policy logics emerging which were variously allowed or foreclosed. It is to the variegated identity of policy-makers that the next section turns.

The Academy's review resulted in a large report, involving a significant literature review. Members of the Working Group were invited because of their specialist knowledge which was considered to be relevant. Most of the members took up specific tasks, writing reviews on a topic. These would then be circulated among the group, the Chair 'loved commenting on things and you know he took it really really seriously and read everything in, huge detail and feedback' (interview, Working Group Member: 40:34), with the authors presenting them to the group at meetings. There were monthly meetings, 'there or there about'. 'It was very hard work and there were roughly monthly meetings, and we did a lot of writing and rewriting. It was a huge project' (interview, Working Group Member: 14:45). This 'hard work' – the labour of producing documents – is what is concealed in the final report; who did what and how much? It is to this which we now turn.

### **Beneath the Bellows**

**This section has been redacted in non-accessed copies because the analysis could not be sufficiently anonymised in accordance with the BSA Statement of Ethical Practice (2017), and with the permission of the participants involved.**

So far, I have traced cognition enhancers' journey from a meliorism-filled object to something beginning to be considered as a premature interest. This is not linear, and certainly not shared among all members of the Working Group, pointing towards the various identities of cognition enhancers. In this section I would like to briefly highlight how the work of policy done through documents (like Foresight's *Drugs Futures, 2025?* and the Academy's 'Brain Science, Addiction and Drugs') work to conceal the work of policy-makers that form part of the assemblage of the relational, discursive, affective, social, and cultural dynamics of policy enactment, in sometimes conscious and sometimes unconscious ways. Exemplified in one interview by one participant when discussing the AMS review; 'The work here is all rather anonymous, isn't it?' (interview, Working Group Member: 17:14). Because this case study involves the overlap of policy-making with science, I draw on insights from the gendered analysis of science.

The title of this section is a reference to the air-pump used in the mid-seventeenth century during public scientific demonstrations at the Royal Society in London. Shapin and Schaffer (1985, cited in Haraway, 1997) argue that it was during this period that there emerged the techniques which now underpin the experimental philosophy of scientific endeavours. Through a combination of agreement on what constituted the appropriate equipment, ways of recording and observing, and what could be considered legitimate means of evaluation, emerged the foundations of what we would today consider the 'scientific method'. The air-pump was at the centre of these techniques' early development (Haraway, 1997: 24), and it is from these that Haraway is able to explore the co- and re-constitution of gender and science. It is labour and activities that go on 'beneath' the air-pump, those who build it, operate it, and those who cannot witness it legitimately that attests to the dynamics of gender at play. Haraway's insights are drawn on in this section to approach the question of gender and science in this case history. The authorless nature of science conceals the contribution of women, with their work (and themselves) devalued as a result, this is very much present in the case of cognition enhancers in UK policy-making.

Haraway (1997: 24-28) discusses how the early development of the experimental way of life in the scientific method excluded women. It framed the conditions by which observation could be conducted. It required the *witnessing* of phenomena. But this evolved in such a way that the ability to witness was significantly limited for women. To provide strength to witnessing, it was considered that it needed to be a public and collective endeavour. However, what constituted inclusion to this standard 'had to be rigorously defined; not everyone could come in, and not everyone could testify' (1997: 25). To be someone whose witnessing was to be believed credible, they needed to be independent. This was to exclude women, not because they were considered to lack the intelligence or rational abilities, but because in seventeenth-century England, women were 'covered' by their husbands or fathers, and therefore could not have the necessary kind of honour at stake (1997: 27). They were non-independent, and by extension excluded epistemologically and physically from the sites of witnessing.

For Haraway, the issue is far more than a matter of sexism as result of prejudices of a dominant group towards another. Rather, she is concerned with how practices of science are constituted in gendered ways, as can also be gathered from her other writings (e.g. Haraway, 1991). Traweek (1992 [1988]: 76-81; 103-105) discusses how

the history of science is constructed such that it appears that ‘that science is the product of individual great men’ (p.78). The individualistic character conceals the fact that science is a highly collaborative endeavour (Wuchty et al., 2007, cited in Gaughan & Bozeman, 2016: 537). Men at the centre of the historical scientific development contribute to the gendering of science. Women are not absent in this history, but they have been hidden in the re-telling: women married to their collaborators have often been the ‘silent and invisible co-author’, the second author, or had their importance generally diminished; and ‘among unmarried collaborators there are many cases of unequal credit for co-discoveries’ (Rossiter, 1993: 327-330). There has been efforts in recent decades to improve the numbers of women in the sciences, but women still have lower representation in STEM (science, technology, engineering, and mathematics) fields (Gaughan & Bozeman, 2016: 537).

We see these same problems in this case study of cognition enhancers in UK policy-making. Of those identified as potential participants for interviews, the predominant demographic was that of men, exclusively white and of middle age or older. This issue of gender was raised in one interview:

Working Group Member, interview, 04:19: [...] I was brought in [...] strategically because they needed a female on the panel quite frankly and you know, that was rather annoying that I was just there as the token woman. [...] I was sort of suggested by somebody else who I work with who knew [Chair of the Working Group] who'd got in touch and said did he know of a female [expert] basically (laughing).

From this account, this member of the Working Group was involved simply because she was a woman, although she was approached with her invitation framed in reference to her previous work (email). The gendered dynamic of the Working Group was not limited to this tokenistic appointment. As discussed above, women are often undervalued within science, and the case of the Academy’s Working Group is no different. The use of BNIM/free-association informed interviewing meant I was able to probe for subject-filled narrative accounts. The extent to which I was successful with different participants was variable, but this interviewee was rather receptive. Her narratives are filled with a sense of being undervalued, that others on the Working Group felt she did not belong there; ‘it was clear that some of the other members of



the team thought “what’s she doing here, she’s not a drugs person?” ’ (interview, Working Group Member: 04:19). None of the male members of the Working Group without a background in drug policy research who were interviewed for this project indicated any sense of having feelings of not belonging.

Although other members of the Working Group spoke highly of this member’s contributions, she felt that her contributions were not held in the same regard. This sense of being ‘just a bit of an outsider’ (06:57) resulted in her working harder to prove herself and in reading ‘everything’ (something not done by all the members), and by her having to do research on areas outside her specialism. She felt that the work allocated to her could be deemed more feminine, such as the issue of smoking in films, a subject of media, and so something social rather than hard fact. The number of women involved in this case study, on the surface at least, is quite small; the lead characters on the principal documents are all male (and all white and, by their professions, implicitly middle-class). But as one probes the history, it becomes very clear that women played major roles in the history of cognition enhancers in UK drug policy.

The strand of women having their work undervalued despite contributing significantly raises an interaction that occurred in one interview regarding the cognition enhancer State of Science Review that was produced for the Foresight project. In intending to conduct interviews with those involved over the history of this case study, the authors of this State of Science Review were identified among my initial potential participants. However, one of the authors was difficult to track down, was no longer connected to a University institution and I was unable to ascertain where she current worked. Failing to locate her, I asked the other participants to see if they could help me locate her.

ARB, interview, 25:55: I’m going to have to ask, who is [author of State of Science review]? I’ve tried to, she doesn’t seem to exist.

BSAD Member, 26:02: She doesn’t really. I don’t know who she is, I mean she’s somebody who, not a major, probably assisted [the other authors] with their literature reviews or something, and that’s my, that’s why I don’t think it was a brilliant chapter, but it’s useful. There’s a lot of information in there.

I found this dismissal of her quite surprising, even more so given that the attitudes among the members of the networks involved over this case study are highly flattering of one another (see Chapter 7).

The extract hints at the dynamics of this sort of work where the subordinate researcher is tasked to do the principle work, with the credit going towards the superior; ‘very often post-docs write things and old men like me put our names to it, when we’ve made sure it’s right’ (interview: 15:54). The choice of the term ‘old men like me’ is itself very telling of the gendered norms of these worlds, their authority inferred with ‘when we’ve made sure it’s right’. There is an entanglement of rank and gender here (Gaughan & Bozeman, 2016), but it is part of a wider dynamic of this case study’s history and gender, and shares with the Working Group member’s account the character of having done a significant amount of work which was vital yet undervalued by others. Work which, through policy documents, becomes silence or is underplayed.

Lastly, there is the case of the two women who probably did more to get cognition enhancers onto the agenda and keep them there than anyone else. Their involvement in the cognition enhancer discourse around the period of this case study is significant. Both were part of the early research teams at a leading UK university investigating one of the early putative cognition enhancers. Some of the earliest interest pieces on the topic of cognition enhancers were either authored or co-authored by them. ‘[One of them] wrote a lot about it, and I think she got that onto the agenda at some learned societies’ (interview, Working Group Member: 36:27). Being leading experts in their fields, they were asked to contribute a State of Science Review for the earlier Foresight project, and they had brought up cognition enhancers in their earlier draft before cognition enhancers got their own review (Foresight minutes).

They were both also involved in the public dialogue for the Academy’s review project, one leading discussions on cognition enhancers. One became a co-opted member to the Advisory Council on the Misuse of Drugs’ working group on cognition enhancers, and provided information to the recent ACMD’s ‘Diversion and Illicit Supply of Medicines’ review (there is no publicly available documentation of their involvement with either). Although one seems to be no longer involved in academia or debates on cognition enhancers, the other continues to be a major voice in continuing the

conversation in academic reviews and the public discourse, contributing quotes and comments to discussion articles on the topic. Her influence in this area was notable by how many of my participants (plus declining potential participants) recommended I talk to this particular person. What is surprising then, is that in the early stages of this research project, neither appeared to have been hugely involved with this case study. Their work out of sight in terms of the public facing documents.

The role of women in the history of cognition enhancers in the UK policy agenda is to be out of sight, their importance diminished, yet their work was absolutely vital. This gender dynamic was not simplistic, and whilst I have focused on the more negative and disadvantaging aspects of the interplay of gender and science, of note is that all these women and their work were spoken of very highly by other participants. Similarly, it would be untrue to suggest that their experiences were principally negative. Haraway notes in her discussion of the development of the ‘experimental way of life’ that the interplay of gender and science is not one where women are simply considered inferior, rather the gendered nature of science is more subtle, structuring the relationships in particular configurations that happen to negatively position women. The interpersonal dynamics – structured through the identities of policy actors – affects the way policy enactment and assemblage occurs in practice.

## **Summary**

In this chapter I have followed cognition enhancers and their changing and various identities during their time within the Academy of Medical Sciences’ review of the Foresight *Drugs Futures, 2025?* report. Documentation from the Foresight project positioned cognition enhancers as a meliorism-filled identity concerning their ability to radically change and improve society and produce a new imagined citizenship. At the outset, however, the Academy’s review was constrained in the potential imaginings a reformed policy would allow. In the public dialogue, despite the identity work to position cognition enhancers as sharing an identity with ‘traditional forms’ of enhancement, the public was unable to share in the constitution of a meliorism-filled identity that emerged previously. The public dialogue also highlighted the different identity of recreational drugs for the public compared to the scientific expertise of the Working Group. Within the Working Group, cognition enhancers were variously considered as the ‘leading edge’ but also ‘premature’, and ‘rather a dull topic’,

pointing to the ambivalence and contestations occurring within the policy-making infrastructure over their identity. Finally, this turned to the role of documents in concealing the relational, discursive, affective, social, and cultural dynamics of policy-making.

Where with the Foresight project, the emotion of hope had a motivating or organising force, and with the Academy's review disappointment is the sentiment that runs through the project: disappointment that there was not more to be done on cognition enhancers; disappointment at being unable to make the radical proposals that were felt that could have been made; and the interpersonal disappointment of feeling like one's work and presence were not valued. The policy recommendations regarding cognition enhancers in the Academy's report were more reserved compared to the policy challenges of the Foresight project which suggested the UK faced a challenge around whether to accept 'the natural evolution of the use of cognition enhancers by healthy individuals' and if there should be regulatory changes that would enable greater development of cognition enhancers (Foresight document), creating the space for the UK to become a world leader in nootropics as detailed in the High Performance scenario.

The Academy's report was to make three recommendations in regards to cognition enhancers: (1) improve research on short- and long-term effects and efficacy of using cognition enhancers; (2) produce new regulations with a suggestion of provision of use in non-medical contexts with the ability to revise evidence for harmful drugs, and place it under the purview of the ACMD; and (3) that 'localised' regulation could emerge to cover issues about use within schools, universities and the workplace (AMS, 2008: 159-160). This shift is demonstrable of the changing identity of cognition enhancers over these two projects. Rather than be definitive on the horizon which could be moved towards the production of an altered society and imagined citizenship, the Academy's recommendations viewed them as having far less potential, and their recommendations reflect this.

This chapter has traced the interactions of policy-makers, imagined citizens and objects, in the assemblage and enactment of policy-making, organised through a principle of identity. The various interactions have been productive of different identities and policy logics. Cognition enhancers in particular underwent an alteration

of their identity in the process of interrogation under the Academy's review, going from a meliorism filled object to a 'premature' concern. We see a continuation of this trajectory in the Cognition Enhancer Working Group that results as of the recommendations of the Academy's review, to which the next chapter now turns.

## 7. From 2009 to 2016

### Introduction

We now come to the final stage of this historical tracing of cognition enhancers on the UK policy agenda. The history that was plotted in the Introduction took us not much further than the recommendations made by the Academy of Medical Sciences which had been tasked to review of the Foresight project, *Drugs Futures, 2025?* The recommendations identified a role for the Advisory Council on the Misuse of Drugs (ACMD) to develop mechanisms for monitoring the potential harm of cognition enhancer use. The Home Secretary at the time requested that the ACMD look into this, and the ACMD set up a Cognition Enhancers Working Group (CEWG). The chair of this group resigned not long after it had been set up, and after only two meetings there is no further note of the CEWG's further existence in public documentation. This seemed to be the end of cognition enhancers on the UK agenda, however what happened was that cognition enhancers were displaced from the policy-making apparatus, but the discourse around them continued, eventually resulting in an admittedly brief return onto the UK policy agenda seven years later.

In the previous two chapters, I have argued that the specificity of the trajectory of cognition enhancers occurred through an interplay of the identities of policy actors, drugs (both for recreation and enhancement) and the imagined citizenship. All this has been underpinned by the dynamics of emotions, which have acted as a circulating force. In particular, the emotion of hope in the form of the meliorism of science and policy had been productive of an identity of cognition enhancers which was potent for the radical alteration of society in positive ways in alignment with the ideas of the scientific experts as policy-makers). Conversely, the emotion of disappointment worked, especially within the Academy's review, to transition cognition enhancers to an object of less concern. Disappointment was also useful for considering how documents conceal the actions of policy-makers that form part of the assemblage of the relational, discursive, affective, social, and cultural dynamics of policy enactment, in sometimes conscious and sometimes unconscious ways. In this chapter I argue that the emotion that came to shape the identity of cognition enhancers within the UK policy arena after 2008 is one of apathy, although the recurring tensions over the two previous projects remain. This chapter also turns to how the emergence and

maintenance of cognition enhancers was only made possible by the networks that enacted them.

This chapter covers the events between the passing of the cognition enhancers topic to the ACMD, why it fell from the agenda, how this agenda was picked up by others and changed in response, and its recent momentary return to the policy agenda. Traced in this stage of the genealogy is the movement to the ACMD, its subsequent move to the Independent Scientific Committee on Drugs (ISCD) and the diverging debates concerning cognition enhancers by two separate projects at roughly the same time (2011-2012): ‘Brain Waves’ by the Royal Society; and ‘Human Enhancement and the Future of Work’ workshop and report jointly convened by the Academy of Medical Sciences, the British Academy, the Royal Academy of Engineering, and the Royal Society (hereinafter referred to as the four-Society report).

## **Marginalisation**

Leading up to this point in the genealogy had been an interesting period for the ACMD. Some of the political debate over drug laws has been touched on in earlier chapters. In the eight years from the start of this case study in 2001, with its unsuspecting emergence from a Cambridge seminar to it entering the purview of the ACMD, there have been four Home Secretaries, and this would become five by the time cognition enhancers left the ACMD remit a few months later. The ACMD is a statutory advisory body set up in provision of the Misuse of Drugs Act 1971, and part of its role is to provide recommendations to the Home Secretary regarding the scheduling of drugs under the 1971 Act into the classifications of A, B, or C.

In March 2009 the Home Secretary, on the recommendation of the Academy of Medical Sciences’ review, requested for the ACMD look at potential regulation for cognition enhancers:

‘The AMS identified a role, together with others, for the ACMD in increasing our understanding of the harms of these drugs, including possible developmental issues, psychological dependence or addiction. The AMS also raised the issue how best we regulate cognitive enhancers. I would like the ACMD to take an active part in these considerations and advise the Government accordingly, especially as to how we keep pace with this rapidly evolving field’ (letter by Home Secretary to ACMD)

Notable is that the positivity towards cognition enhancers which characterised the Foresight project's orientation is now absent in this letter. The focus on 'developmental issues, psychological dependence or addiction' is consistent with a concern over recreational drugs that orientates the work of the ACMD, although it does use the term 'regulate' rather than 'control' (the term used in reference to 'legal highs' in the same letter), which suggests that cognition enhancers were not considered identical to recreational drugs and requiring prohibition. The last part is particularly significant, 'how we keep pace with this rapidly evolving field' indicates an assumption within the discourse around cognition enhancers that advances will be made, and will be made soon.

The Chair of the ACMD set up the Cognition Enhancer Working Group (CEWG) to consider this recommendation and it began to co-opt members. It is not uncommon for the ACMD to set up working groups whose membership is composed of a small number of members of the Council, and for external expertise to be sought through individuals who are co-opted to the working group (interview, ACMD Member: 11:01). Two members were co-opted for the CEWG, one a leading expert on cognition enhancers, the other a prominent philosopher on the ethics of human enhancement (Freedom of Information Request, no number provided). These two co-opted members had been vocal in their support for potential cognition enhancers in the form of works published in their names and providing comments for the media. This is significant because when we come to the CEWG moving to the Independent Scientific Committee on Drugs, these two members do not follow, instead going on to participate in the learned society reviews, with there being significant difference between the two directions in terms of the view on cognition enhancers.

The chair of the CEWG was a recent appointee to the ACMD (ACMD annual report), and was the same individual who undertook the survey of the pharmaceutical industry for the Foresight project. At their first meeting in October 2009, they made plans for quite an ambitious review. The CEWG and the Legal Highs Working Group were convened as one group; with two sessions, the first being dedicated to the topic of legal highs, and cognition enhancers forming the basis of the second (interview, CEWG Member: 46:21). That the two were initially put together is unusual, as they were clearly separate groups with the ACMD's Chair's response to the Home



Secretary's request for advice regarding both categories of drugs. They were also clearly separate issues for those involved:

CEWG Member, 46:47: [...] the issues are very different. Legal highs was unknown chemicals coming into the country that were legal because no one had got around to banning, you didn't know what they were, whereas the cognition enhancers you knew exactly what they were, the question then was what were they doing, who was using them, and why? So the two issues didn't really overlap, and, legal highs still going on basically.

Minutes from the meeting were not kept, but according to the ACMD's annual report, the CEGW was to restrict its review to the three most well-known putative cognition enhancers: Modafinil, Ritalin, and Adderall.

There is a discrepancy regarding the number of meetings that the CEWG held. There had been plans for a second meeting but, as one interviewee explains, this was interrupted by external events.

CEWG Member, 13:54: [...] So you were asking, how many meetings were there of that committee. And as far as I'm concerned there was one, and that was held in October 2009, and a couple of weeks after that [Chair of the ACMD] got sacked, so that, we planned a second meeting and the first meeting we just had a discussion of scope and the kind of things we would do, and it really was very ambitious [...], but we really didn't get very far because it all got interrupted by [Chair of the ACMD]. And he was sacked at the end of October 2009, and I guess all this is on public record, [...]

We didn't feel the government understood, there was a history to it, that until, before [...] the Home Secretary had almost invariably acceptable the evidence of the ACMD over the classification of drugs. [...] And then that changed, over cannabis and over ecstasy, the government overrode the recommendations of the ACMD, and that created I think quite a lot of surprise and some bad feeling, particularly when the government said that in response, and this is more than one Home Secretary we're talking about here, that the reason why was that they had other sources of information, and I felt and other's felt that, the government shouldn't have had other sources of information because we tried to take evidence from \*all\* views and if they did have information why didn't they share it with the ACMD? So I think that was not a very clever reply, and one that perturbed us I think, we were a bit upset about it basically over the reclassification of

ecstasy and cannabis. Which resulted in huge reports, a huge amount of work went into it, and then it was just dismissed, so, there was a backstory here.

This was a politically contentious time for the ACMD. As highlighted in the excerpt above, there was ‘bad feeling’ within the ACMD with members being ‘upset’ with how their work was not being valued by successive Home Secretaries. Tensions had been building over the previous years, and came to a head in late October 2009 when the Chair of the ACMD was sacked by the Home Secretary for being ‘a campaigner against government policy’ (Home Secretary quote in newspaper) as a result of the transcript of a presentation they gave at King’s College London being made public (letter to the Science and Technology Select Committee).

Tracing this genealogy shows how the wider situation can result in the change in direction of processes. Bad feelings and upset, which up to this point had little to do with the trajectory of cognition enhancers on the UK policy agenda, was to come together and alter the direction of travel. The political fallout from the sacking of the Chair of the ACMD was significant for the CEWG.

ACMD member, 70:58: [...] There was quite a lot of talk about a mass resignation by the way, of \*every\*one [in the ACMD]. But it was impossible because some people really couldn't do it, so it had to be the way it was. But the feeling was, that, and voiced through emails and the rest of it, that we should all - if we could - just walk away from the whole ACMD and just walk away from it.

In the end, mass resignation did not materialise, but several members did resign, including members of the CEWG, among them the chair. This was to have the effect of ending the discussion of cognition enhancers on the policy agenda. On paper, the CEWG did continue. According to the ACMD annual review, it did look for a new chair, however, there is no record of a new chair being appointed. After being sacked, the Chair of the ACMD founded the Independent Scientific Committee on Drugs (ISCD). Among the membership of the ISCD were many of those who had resigned from the ACMD, including the Chair of the CEWG. When a cognition enhancer working group was convened by the ISCD, they contacted the ACMD to enquire what the CEWG was intending to proceed with. The response was ‘they [the ACMD] had no further interest in it’ (interview, ISCD Member: 13:54). A Freedom of Information

Request (no number provided) to the Home Office suggests this was because of ‘prioritisation of the ACMD’s focus and resource on other key work areas’.

But why did cognition enhancers stop being a priority? The Foresight project had considered them important, and the Academy’s review identified a need for the ACMD to advise on way to regulate ‘this rapidly evolving field’ (letter from Home Secretary to ACMD). There is no explicit reason for why cognition enhancers were allowed to fall off the official policy agenda. The re-prioritisation of the ACMD towards legal highs is one example of how the wider context can close down discourse, but the new Chair of the ACMD had been a member of the AMS working group, and was among the members who felt cognition enhancers were a ‘rather dull topic’ (interview, AMS Working Group Member: 15:41). The quiet move off the agenda points towards the apathy that surrounds cognition enhancers at this point in the genealogy. Furthermore, that the personnel responsible for cognition enhancers being on the policy agenda had now left, further indicating the significance of the policy-makers of policy-making.

This marks the end of the initial case study of cognition enhancers on the UK policy agenda, but it is not the end of the discourse on cognition enhancers. The genealogy that has been traced so far has been guided by their relation to the policy infrastructure within which these discourses circulated. But discourse does not have clearly defined boundaries, and just as it was going on before they emerged on the Foresight project’s agenda, they were ongoing elsewhere at the same time (BMA, 2007; AAN, 2009; CEST, 2009) and did not just cease to be. What happened after 2009 and the resignation of the ACMD CEWG’s Chair is that the discourse moved from the policy agenda, but it continued in another committee, the ISCD. It was also picked up by two learned society reviews. As I will demonstrate below, the discourse went through a process of divergence and displacement. What occurs through this discourse was an alteration of what constitutes cognition enhancers, and in this it can be revealed why they became an object of indifference to the UK policy agenda.

### **Independent Scientific Committee on Drugs**

After 2010, the discourse of cognition enhancers diverged away from the policy context and the genealogy itself split into two. It was first picked up by the ISCD. The ISCD was formed by the former Chair of the ACMD to be ‘the only completely

independent, science-led drugs charity, uniquely bringing together drug experts from a wide range of specialisms to carry out ground-breaking original research into drug harms and effects' (DrugScience, c2017). In this new organisational setting, the policy discussions continued.

The ISCD cognition enhancers group began in much the same vein as the ACMD CEWG by recruiting membership from within the organisation and approaching external expertise (interview, ISCD CEWG Member: 20:48). One of the co-opted members to the ACMD's CEWG was approached to ask if they would like to be part of this new group.

ISCD Member, 56:32: [...] what it boiled down to is that we didn't get [the original ethicist], so that's why I asked someone about a recommendation and got [alternative neuroethicist]...

ARB, 56:45: Oh okay, yeah.

ISCD Member, 56:45: ...to come and sit as our ethicist, and we had, yeah, it would have been interesting to have [original co-opted member of the ACMD's CEWG], erm, I think they felt. I don't think they was that. I got the impression they weren't that enthused about it frankly and did feel it was being covered elsewhere.

This notion that cognition enhancers were being covered elsewhere is important. At this stage of their trajectory on the policy agenda, cognition enhancers had vacated a space directly influenced by government and policy-making in its traditional understanding. It had become displaced among different groups who are tackling it from different positions. These positions could be largely considered to fall along similar lines of the liberal and conservative as discussed in Chapter 4. However, whereas the debate between the liberals and the conservatives was largely to be considered as existing on a more hypothetical plane, cognition enhancers in the UK policy arena beyond 2010 had to start tackling much more concrete concerns. The way these two positions diverged in the face of the concrete of cognition enhancers is informative of how rationalisation and discourse moves and are fluid under political demands.

The other forums were the learned society reviews (discussed below), and both the co-opted members to the ACMD's CEWG were involved in these other reviews. The

ISCD group contacted one of the learned societies that were doing a review to gain an understanding of their activities:

ISCD Member, 54:27: [...] I mean the time [...] there was something from the Royal Society were doing a survey I think.

ARB, 54:47: Yes, I've recently come across that.

ISCD Member, 54:48: And I got in touch with them about it, see if you know I think it again we decided that what they were going to do was not, was much more abstruse, and was not going to cover the kind practical issues that we wanted to get to grips with, basically. And I'm sure that was really the thinking we gathered from working on the ACMD, it was right down to the practicalities of users, what the effects on users and that kind of thing you know so it came down to sources and costs and etcetera, etcetera. Legality.

The 'kind of practical issues' that the ISCD wanted 'to get to grips with' really brought the cognition enhancer horizon very close. This closed off considerations and imaginings of what could potentially be, and with this the meliorism that once motivated the discussions of cognition enhancers during the Foresight project became absent.

Without hope to guide the framing of cognition enhancers, they became understood in very different terms. I include the excerpt below from one of the members of the ISCD's group on cognition enhancers as it articulates the different concerns motivated by the perspective on cognition enhancers taken by the ISCD group. It picks up the sentiment that 'there wasn't much more to talk about' with regard to cognition enhancers (interview, AMS Working Group Member: 12:35) that came up in the Academy's Working Group. Also it defines a position within the discourse of cognition enhancers to which the ISCD group considered themselves in opposition; that for many of those advocating cognition enhancers "...they tended to treat all cognition enhancers as if they're exactly the same and they all worked, whereas they weren't all exactly the same and it wasn't clear they all worked'.

ISCD Member, 20:48: [...] we asked around amongst other people who had, investigating similar things and we, we, there was a concern that there had been other reviews, several reviews of cognition enhancers and there was a concern that all the reviews had basically said it all. But our feeling was that, [they] tended to deal with generalities, that is, they tended to treat all cognition

enhancers as if they're exactly the same and they all worked, whereas they weren't all exactly the same and it wasn't clear they all worked. And so you would then have a paper on the ethics on using them, it's like the ethics of using something that you were not sure whether existed or not, which didn't seem to me to be particularly useful. (laughing) And they were not critical in the sense that they didn't examine how effective they were, they just said, these things work therefore we need to do something about it, we need legislation or we need control or whatever. But what if they didn't actually work very much? In which case you wouldn't need to really worry yourself about them. Apart from the harms.

ARB, 22:24: Yes.

ISCD Member, 22:25: So they didn't do much good, and they were potentially harmful, that's something that really needed to be highlighted. so, erm, we initially decided to concentrate on Modafinil because it was clearly getting a lot of publicity at the time [...] I think we soon we must have decided in the following year that we would actually broaden it out, so maybe what would be interested in would be to have a comparison, so we would look at caffeine and we would look at Ritalin and Modafinil, I don't know whatever we put in there, might have been a fourth one. And particularly interested in caffeine, because obviously everyone has caffeine, so it was a useful kind of marker for whether something was really going to be very beneficial or not, cause if something was no better than caffeine, then, what was the point of setting up a whole legal framework to control it?

In the first part of this extract we see how cognition enhancers are now being identified as not being a potential benefit to society, and the notion of harm gaining presence, something which comes from rationalisations around drugs inherent in the apparatus of the ACMD. This identification of cognition enhancers is informed by the ISCD group's previous identity as part of the ACMD. The last part reveals a shift in the way of thinking about cognition enhancers. In the drug binary of the medical and the recreational, cognition enhancers stood as an outsider throughout this genealogy. They were presented by the Foresight project as a new breed of drugs, and up to this point they had been variously situated in relation to recreational drugs (see AMS public engagement activities, Chapter 6), and medical drugs (see treatment vs. enhancement, Chapter 4), either as being framed as the same (sharing an identity) or

as being other (an opposite-negative). Cognition enhancers had therefore been variously placed between the two ends of the drug binary. With the ISCD review, they were placed with what I will refer to as the non-drugs; drugs which are not ‘drugs’, such as caffeine, cocoa, and sugar. It is in this new relation that indifference becomes more apparent; if they are not drugs, or at least not in a way that we understand them as something worthy of response, then why would they be a concern?

Earlier in this genealogy I argued that part of cognition enhancers’ identity as a ‘new breed of drugs’ capable of delivering radical change was in part because of the context in which the policy discussion was orientated towards a horizon which was distant. This enabled meliorism of science and policy-making. As cognition enhancers journeyed along on the policy agenda, each stage was tasked with considering a future less distant than the previous project; bringing with it firstly a disappointment (most present in the Academy’s review, but also present during the Foresight period), but in the latter stages to an apathy. Cognition enhancers could no longer be given an identity of ‘what could’, but rather ‘what is’ and this resulted in a non-drug equivalent identity. This lack of imagined-possible was reified within the ISCD’s cognition enhancer working group when they looked for indications that the near horizon would bring changes:

ISCD Member, 26:32: someone had very kindly published a huge review in Nature on every possible drug target that might be a cognition enhancer.

[...]

ISCD Member, 28:23: Based on animal information and whatever, so I put that list against the list of what the top-10 companies were doing and found almost nothing. So what it meant was that the drug companies were not developing anything that, according to this review, or very little, could be construed as, and these were hypothetical cognition enhancers. You then have to go show they actually work.

ARB, 28:46: Yeah, yeah.

ISCD Member, 28:47: But it was quite clear there was no policy to development, and there was nothing, the view being pushed by some people that ‘we need to act now’ because these drugs are going to be coming down very soon, all these drugs are going to be on the market. And that fact was they weren’t. So there wasn’t any need to do anything soon. Now, it is quite difficult to know

quite why, obviously this was an idea that appealed to the newspapers, because they love to slag off students and (unclear - 1 word?), so, and I, I, and you get the feeling, and I, I, you know, I don't know whether I should say this or not, there were, you got, we got the feeling that it was, it was, it were a little bit of you know academic careers were at stake here to suggest this issue was much bigger than it really was, or at least they were uncritical about the magnitude of the problem, so they were quoting this Cambridge survey<sup>26</sup> all the time and then writing papers saying we need to deal with.

I include this excerpt because it demonstrates two points, and gestures towards a third. Firstly, it shows how the less future orientated concern towards cognition enhancers had completely removed the meliorism that underpinned the motivating dynamics of the earlier part of the genealogy of this case study. Whilst cognition enhancers were an abstract object, this had enabled them to be embodied with notions, concepts, and hopes that were not made contingent by material agents (the putative drugs themselves, the pharmaceutical industry apparatus, the ethical-legal framework to allow for development, etc.). Secondly, through the process of this research it is fair to say that I have shared the same internal conflict that this participant was tackling with:

I, I, and you get the feeling, and I, I, you know, *I don't know whether I should say this or not*, there were, you got, we got the feeling that it was it was it were a little bit of you know academic careers were at stake here to suggest this issue was much bigger than it really was (emphasis added).

The stuttering and repetition contained here signalling the internal conflict.

It is this internal conflict that points towards the third point. In the conducting of this research, I have struggled with this same problem myself, how this history seems to have occurred because of the persistent efforts of a small number of individuals, especially when there was evidence that cognition enhancers did not constitute that substantial an issue. However, as advanced in Parts I and II, policy is not

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<sup>26</sup> This Cambridge survey, which appears in some writings as evidence of student prevalence in the UK, was published in the University of Cambridge's student newspaper *Varsity* (Lennard, 2009), stating a 10% prevalence of use in the student population.



individualistic, it is enacted by an assemblage of multiple and heterogeneous subjects/objects made coherent through relational, discursive, and affective dynamics. Individuals cannot explain years of activity and hundreds of thousands of pounds spent by various government departments and organisations. To understand this all we need to look towards the importance of networks over this case study.

## **Learned Society Reviews**

Whilst some went on to form the ISCD CEWG, others decided to join the two Learned Society reviews. The displacement of the policy discussions regarding cognition enhancers into diverging areas mimicked the two strands of the identity of cognition enhancers that had been running through the previous two stages of this genealogy. On the one hand, cognition enhancers were potentially in already widespread use, and could fundamentally alter the dynamics of society. On the other, there was a scepticism that suggested the claims were overstated, their use is not that widespread, and there was little chance of them making a substantial difference in the near future. At this stage of the genealogy, late 2010 to early 2011, within the ISCD this discussion had solidified on the latter. The former position was maintained, but it evolved in response to the arguments of those who were sceptical of the potential for cognition enhancers.

In 2011, the Royal Society published its ‘Brain Waves’ project which had investigated ‘developments in neuroscience and their implications for society and public policy’ (Royal Society, c2017). The following year the Academy of Medical Sciences, the British Academy, the Royal Academy of Engineering, and the Royal Society (AMS et al., 2012) published the four-Society report. The two projects are considered together because they occurred at a similar time and involved many of the same actors. The way they shifted the discussion on cognition enhancers also warrants them being discussed together.

The Brain Waves project by the Royal Society focused on developments in neuroscience and their implications for society, and brought up the issue of cognition enhancing drugs, whilst the four-Society report focused on enhancement technologies including cognition enhancers more directly. Both were engaged in imagining what kind of society can be made by the application of these developing technologies.

Cognition enhancers only formed a small part of both projects, but what is interesting is how the two reports frame them.

The Royal Society framed their project in terms of the need to consider how developments in neuroscience:

‘are likely to provide significant benefits for society, and they will also raise major social and ethical issues due to wide ranging applications. ...have implications for a diverse range of public policy areas’ (Royal Society, 2017c).

This continues in a similar ‘excitement’ around scientific advances and their potential; ‘we are faced with the realisation that a new era has begun in neuroscience’ (Royal Society, 2011: 32). Subsequently, there was the circulating of the same meliorism towards neuroscience, if in a more measured presence, which underpinned the earlier Foresight project.

There are direct references to the Foresight project and the AMS’s subsequent review as part of the discussion of the relevance of cognition enhancers. Notably, the Brain Waves project included members who had been involved in these previous projects. Both the Foresight and AMS reports noted that more research needed to be done on cognition enhancers, and this argument is repeated in the Brain Waves review with an emphasis that ‘these factors have not been researched extensively’ (Royal Society, 2011: 28). Citing these previous reports as fact necessary for the argument to succeed has been documented by Bruno Latour (2002 [1987]). An interesting dynamic here is we see actors in effect citing themselves, but this was unintentionally concealed behind the organisational authors of the documents. In Chapter 6 we saw how the documents conceal a number of inter-personal dynamics, we can see how the unclear heritage of authorship further conceals the constitutive networks of policy-making.

Human Enhancement and the Future of Work similarly shares the future orientation; ‘that was all very speculative, very science fiction-y I thought’ (interview, four-Society review member: 25:31). However, it did not share the Royal Societies excitement about the potential of technological advances, and had a clearer emphasis on risks (AMS et al., 2012: 5). With a future vision, the four-Society report similarly stresses more on the unknown:

‘Given that there is currently little debate about the use of enhancements at work or an academic research base to draw upon, the

report aims to highlight possible implications of such use, which are likely to be complex, and to identify potential areas for debate' (ibid)

There is a divergence here between the direction taken by the two reports and that of the ISCD. The ISCD focused far more on the *knowns* around cognition enhancers – which substances putatively worked, the extent to which they did, and the likelihood of future drugs entering the market from 'big pharma' – which fixed them as particular identities, restricting their possibilities. The two reports, in focusing more on uncertainties, kept the identity of cognition enhancers unfixed. Positioned in this way, cognition enhancers were maintained as an unknown object, open to possibility.

This is not to imply that the Learned Societies were ignoring evidence, both reports are highly evidenced pieces informed by leading experts in their fields. Both were commissioned to consider the future and reflect on both the benefits and risks to society. With this framing, those involved were orientated towards developments that had the potential to pose the biggest changes and the effects they might have.

Four-Society Workshop Attendee, 25:31: Yes. That's right, that's right, and, so [other attendee] was probably the \*most\*, erm, er, optimistic, well optimistic I don't know is the word but the most concerned that there would be significant changes, erm, she thought, she was making predictions about what students might be doing very soon.

Keeping cognition enhancers unfixed enabled an interesting strategy to emerge that is present in both reports. 'Cognition enhancement' became a broad suite of technologies and strategies, of which enhancement drugs were part. The reports noted the potential of other developments in the field of neural interface systems, such as transcranial magnetic stimulation (TMS) and transcranial direct current stimulation (tDCS). They also link cognition enhancement to more mundane and ordinary practices such as 'tool-using, social organisation, speech, written language, and more recently universal formal education and the use of computers' (Royal Society, 2011: 82). This reproduced the narratives and discourses present in the AMS review. By moving cognition enhancers to belonging to a suite of strategies and technologies, it changed the comparisons that could be made:

Interview, 50:15: [...] So, I can remember attending some of these kind of discussions, about the ethics of these kind of drugs, and someone actually pointing out that actually it was a lot more ethical than public schools, which after all are only available to

the rich and certainly ups people's performance in exams by a large margin, whether its deserved or not. And it's, and the idea of putting a pill in the drinking water is much more egalitarian. Some people didn't like that argument. But it's a good argument actually.

[Clarification of who the debate was between.]

Interview, 51:13: No, this was another thing, but it was just this idea. [Person A] was against the whole idea of medicalising what he regarded as a natural distribution of intelligence and behaviour and the rest of it, [Person A] is very much against drugs for ADHD like Ritalin, claiming they were highly over prescribed. Which is probably true, but almost against them in theory, cause here he said 'here's an example of a condition which has been invented by the pharmaceutical industry to control. Whereas it's a behavioural abnormality which might be better managed by understanding what's at the basis of it.' And he has a point, but his idea that, you know, he had this argument with [Person B] who said well its (?)counter(?) argument that it's actually a lot better to put it in the drinking water than sending it to public school. I don't think [Person A] was very impressed by that, though I'm not sure he would disagree, but I mean there is a point that it might be more egalitarian to treat the population. It's like fluoridation for the brain.

ARB, 52:14: Yeah it does sound one of the ethical debates you see in the...

Interview, 52:17: Well, you see that point of view, this idea of fluoridation for the brain \*totally\* misunderstood the idea there would be side effects and harms you see, [...]

The discourse on cognition enhancers thus changed; we were no longer talking about drugs necessarily and the strongly associated problems of harm, but of a range of practices that are highly variable in their effectiveness and realisation.

The displacement of cognition enhancers from the traditional policy apparatus post-2009 saw them diverge as an object. With the ISCD, they moved towards a categorisation of recreational drugs with a 'non-drug' identity equivalent to caffeine. Whilst with the Learned Society reports they became subsumed within a categorisation of a grouping of technologies and strategies. The expansion of cognition enhancers into the category of 'cognition enhancement' occurs through the wider discourse of cognition enhancers (see Chapter 4). It is the one that remains now

from this genealogy, as evidenced in a recent 2015 review on cognition enhancement in *Philosophical Transactions of the Royal Society* which identified pharmaceutical drugs, TMS, tDCS, and computerised cognitive training as potential methods. This rhetorical shift is important because it is what has kept the cognition enhancers discourse alive through the networks that diverged from the ACMD and ISCD to the Learned Society reviews.

## **Networks**

The emergence and maintenance of cognition enhancers was only made possible by the networks that enact them. In this section, I want to discuss some of the specificities of the networks that operated through this genealogy. Through the processes of analysis, three points in particular emerge. Firstly is the self-reproducing nature of particular lines of argument. This is what in part results in the previous claim of the feeling that academic careers were at stake. Here I want to argue that it was the pressure of an academic system that encourages ‘exciting’ and ‘new’ research that worked to move cognition enhancers onto the agenda and kept them there even in the face of strong arguments against. This is about the tensions through which the system emerges and the role of conscious/unconscious action therein. Secondly, I want to argue that in part this occurs because of the extent to which there is an interconnection between actors involved within this genealogy; social connections worked to keep similar voices and arguments reoccurring. Thirdly, I want to consider the role of the emotions in maintaining the network. Academia as a vocation, as a duty and as a ‘calling’ indicates an investment of self in one’s work is necessary to be productive over these multiple and intensive projects, and the emotions also worked to connect people together and maintain the bonds between individuals.

## **Self-Reproducing Discourses**

It is in the context of only a small number of people involved in this policy apparatus and only a small subset of these holding a positive view towards cognition enhancers, the sentiment of ‘academic careers were at stake’ emerges. However, this would imply inaccurate use of evidence, or bias of some kind. In this subsection, I argue how the system itself generates self-reproducing discourses. That the advancing of cognition enhancers in the face of evidence that would suggest policy responses would be ‘premature’ (interview: 42:50), is not to do with specific individuals, but rather it is a

function the academic system and the process of knowledge production. It builds into the replicability crisis and publication bias that have been identified within science practices. The pressures inherent in them were increased in the case of cognition enhancers because of their future orientation.

There is currently a replicability crisis ongoing in the sciences, most pronounced in psychology. As Pashler & Wagenmakers (2012) explain, this crisis has been triggered by a number of high-profile cases of fraud, including by Diederik Stapel, who had been fabricating data up to and including entire experiments. These cases highlight the importance of replication studies, but the problem is that scientists have struggled with replication of results. Replication problems was not limited to researchers trying to replicate each other's studies. A survey of 1,576 researchers in *Nature* found that over 40% of those surveyed had at some point failed to replicate even their own results (Baker, 2016: 453). These were not restricted just to psychology; any scientific field can fall foul (Ioannidis, 2005 cited in Pashler & Wagenmakers, 2012: 528) as has been demonstrated in the field of cancer biology research rarely verifying the original results (Begley & Ellis, 2012, cited in Pashler & Wagenmakers, 2012: 528).

There are a number of elements that contribute to this (see Pashler & Wagenmakers, 2012, and the linked special issue in *Perspectives on Psychological Science*). Most relevant here is the matter of publication bias, and how this is has been:

‘exacerbated in recent years as academia reaps the harvest of a hypercompetitive academic climate and an incentive scheme that provides rich rewards for overselling one’s work and few rewards at all for caution and circumspection (see Giner-Sorolla, 2012, this issue)’ (Pashler & Wagenmakers, 2012: 528).

Publication bias is the phenomenon where studies are more likely to be published if they have statistically significant results than if there was null or non-significant results. This is not a new phenomenon (Greenwald, 1975; Dickersin et al., 1987; Easterbrook et al., 1991).

Giner-Sorolla (2012) argues that publication bias occurs because of the ‘bottleneck’ that is produced with there being an excess of researchers wanting to publish their results compared to the number of outlets for disseminating their work. This is intensified by it being considered that publication in some journals would be to negatively affect one’s career (Giner-Sorolla, 2012: 564). Researchers wanting to publish thus need to navigate two simultaneous challenges; perfection and novelty.

Journals want aesthetically pleasing results where the hypothesis matches the results perfectly (Giner-Sorolla, 2012: 564-565). Researchers use flexibility in the research process including ‘(a) choosing among dependent variables, (b) choosing sample size, (c) using covariates, and (d) reporting subsets of experimental conditions’ (Simmon, Nelson & Simonsohn: 2011: 1360) in a process of ‘HARKing’, ‘hypothesizing after [the] results [are] known’ (Kerr, 1998, cited in Giner-Sorolla, 2012: 565) to ensure a clean match between hypothesis and data.

What researchers are ‘HARKing’ after is that statistically significant result with novelty (Giner-Sorolla, 2012: 565-566). With so much competition between articles for editors of journals to choose from, novelty becomes a major factor. Journals want articles that will generate interest. Young et al. (2008) suggest thinking about scientific information as an economic commodity, and that scientific journals are a medium for its dissemination: ‘journals generate revenue; publications are critical in drug development and marketing and to attract venture capital; and publishing defines successful scientific careers’ (Young, Ioannidis & Al-Ubaydli, 2008: 1418). The network of academia and an academic system which values novelty recalls the Foresight State of Science reviewers being encouraged to ‘highlight some recent/exciting studies/pieces of science that should be recently published or in press’ (Foresight Minutes).

Cognition enhancers on the UK policy agenda brought together the domains of policy-making in its traditional sense, science and academia. This addresses the concern towards cognition enhancers as posing a significant problem requiring policy responses not standing up to critique, and highlights the networked nature of their maintained presence. Cognition enhancers were novel and exciting, especially in a context where those involved were encouraged to think towards potential futures which might have radically altered the shape of society. This created hype around cognition enhancers, and because they were so new and were ‘promising or threatening to drastically change the lives of all citizens’ (Dubljević, 2012: 29), a good case for further research and research funding could be made.

The resulting discussions and research then became a basis for evidence of growing interest in the field and its evolving nature, which in turn justifies further research; for example, the Royal Society project and the four-Society project. The former raises

cognition enhancers by mentioning they had been raised by the Foresight project. None of this was with malicious intent, it is simply a function of the networks and the system they operate within. The network is produced by and reproduces particular discourses (i.e. cognition enhancers are new, rapidly evolving, poised to change society, and require attention), which in turn can self-reproduce.

### **Interconnectedness**

Partly why the system was able to self-reproduce discourses has been due to how highly interconnected the actors involved were. This can be seen from a number of factors. Firstly, when initially identifying potential participants for interviews, it became apparent that some names occurred repeatedly. Later, during the interviews, the interviewees discussed how their involvements with projects occurred through their connections to others. Similarly, many of the actors involved within this genealogy were involved with one another in external activities. Finally, the interconnectedness of the actors involved is indicated by the frequency with which it was suggested I talk to others. It is in this context of a highly networked arena that we can begin to understand why paths of interconnection point to a small number of people as alluded to in the previous section.

To outline every way that the same individuals kept reoccurring would require too much space, but we can consider some indicative examples. Of those in attendance at the CUGPOP seminars from which the Foresight project emerged, two were to become involved with the Foresight Project Management Group (unpublished document), five were to write a State of Science reviews or be reviewers, two were to be part of the Academy's review Working Group (Foresight document; AMS document), including one of the organisers of the CUGPOP seminars becoming the chair. Of the Foresight project, eight of the BSAD contributors were on the Academy's Working Group or involved in adjoined activities, whilst the person who conducted the Pharmaceutical Survey chaired the ACMD's CEWG. Membership of the CEWG included a member of the Academy's Working Group and a co-opted member involved in Foresight as a State of Science reviewer and the Academy's public engagement.

With the BNIM/free-association informed interviewing approach, by pushing for narrative accounts, I often tried to gain interpretations of how people came to be



involved at certain moments in the genealogy. Some accounts indicated that the reason for them becoming involved was not due to any prior connections.

AMS Working Group Member, 08:59: [...] No, I got a call one day out of the blue from, from [name], saying that that working party was being, well that the work had been contracted to the Academy Medical Sciences, sort of follow on work, [...] and that they'd like me to be a member of it, if I were interested and willing, you know, and so, that was, that was how it started, and I can't tell you why it was me that [Chair] asked.

Later in this interview, the respondent explained that they believed they were likely chosen because there were few people in their field interested in the topic of cognition enhancers.

However, in other accounts, there is a blurring of the expertise and the social connections:

Interview, 12:39: Cause I've known [person] for a long time, I know much more about [topic] than [person] ever knew. [...] But erm, it would be obvious he would ask me, the same university and I've known him for years, and from that very first seminar, [CUGPOP].

Interview, 05:03: They approached me and a small number of other [specialists] they worked with. [...] Erm, and I think I was probably recommended fairly warmly by the director of [external] project, [...] And I think he recommended me, [...]

Interview, 04:25: And that [invitation] came, through contacts as all these things do.

Interview, 04:19: I was sort of suggested by somebody else who I work with who knew [person] who'd got in touch and said did he know of an [expert in field] basically.

ARB, 06:14: [...] so how did you come to be on the [working group]?

Interview, 06:44: I presume [...] I happened to know a little bit [person], er from when I was an undergraduate at [...] but whether that was a link or not I don't know. But I know [person] for some 30 years earlier.

This is not to suggest that there is any evidence that people became involved over the period of this case study without the required skills or knowledge.

Social connections were in part forged by people being aware of others as experts in their field. This can be seen in the extract below where one interviewee recalls a meeting where they recommended someone to take on an important role in one of the working groups covered in this genealogy:

Interview, 38:23: It was [person] who did it, that's right. That was my suggestion interestingly.

ARB, 38:26: Oh yes?

Interview, 38:27: Cause peop(le), I'm a member of the [organisation], and the question was, I couldn't possibly, you know obviously I couldn't be (unclear), I remember having a brainstorm with a couple of [organisation] members and I thought 'Why not [person], he knows the field' and I think he was pleased to do it, [...]

We also see how this can work in the opposite direction below, where a similar event occurred, but in this instance it resulted in people being kept out of the network:

Interview, 06:48: [...] They consulted with me, saying they wanted to do this [project], and erm, did I have any ideas as to who might be on it. And erm, they came up with a few names, that I thought were not ideal, and we ended up discussing a few other names and we got a nice balance [between those involved]

During the process of developing this genealogy and compiling the archive, it became apparent how interconnected a lot of the involved actors were. As discussed previously, when identifying potential interview participants from documents, I noticed that some names appeared over several events. Some names kept reappearing as the process went on, either through reference within the interviews or by other documents that were collected, and the high involvement throughout the case study and beyond of some individuals who did not initially appear to be particularly involved in this case study was discussed in Chapter 7. Some individuals shared research funding for projects that shared similarities to issues covered at various

stages of the genealogy, and people may have worked together on other unrelated projects or committees (membership list of an ethics council).

The interconnected nature of the individuals involved over this period points to why the connections lead to only a handful of people. A small number of people may provide an impression of them being responsible for the maintenance of specific arguments, but it is the network that results in it being those specific individuals. They were the experts on that topic and known to those involved, and the contingency of the networks meant they were thus given the invitations rather than others.

### **Emotions as Maintenance of Networks**

The final element concerning networks I want to consider here is the role that emotions play in maintaining the relationships that constitute a network. In the previous chapter, I touched on disappointment as a mediator in the relational dynamics of policy-making. Here, I focus on two processes. One is a personal attachment to one's work, that I will refer to as academia as a vocation. The projects that form this case study of cognition enhancers on the UK policy agenda were large projects, taking many years to complete and requiring extensive amounts of work on the part of those involved, often without financial reward. To sustain this involvement requires a personal investment by those involved in their work and the purpose of that work. The second process is how relationships were maintained through emotions, they kept the network together by investing positive sentiments between those involved.

The notion of academia as a vocation takes inspiration from Weber's vocation lectures – Science as a Vocation, and Politics as a Vocation (Weber, 2004a [1917]; 2004b [1917]) – as the lectures discuss these professions as a 'calling', someone's life work, and a sense of duty. I was struck how this similarly came through in people's accounts in the interview process. An emotional commitment to their profession or work was a strong motivational aspect for many of my participants and those they included in their narratives for getting involved in the various projects involved in this case study. Emotions worked to connect them to their work, and this was mirrored in how people referred to one another.

Interview, 06:57: I felt I was somehow contributing to science or to the world or somehow I don't know, it was, [...]

Interview, 01:49: I did a whole range of jobs and found myself in the end, back working in science working [on Foresight Project]. Trying to solve big problems with science which was, which was wonderful for me because I was able to go back to using quite a lot of things I'd learnt at university to help answer problems in policy today.

This was also demonstrated in the dedication they put into their work evidenced by how hard they work.

Interview, 45:24: that took about 2 or 3 years to produce and I was the [expert] on that, that's probably why I got onto [project] in a way I suppose because people had seen I was prepared you know to put the long hours in to produce these long reports.

Interview, 15:45: It was very hard work and there were roughly monthly meetings, and we did a lot of writing and rewriting. It was a huge project. And it was a project of love for [the person in charge], and I think it's really high quality, actually.

This last extract I find particularly indicative because of its similarity to the idiom 'labour of love'. To say something is a labour of love is to infer that the work is done because there is a belief that the work itself is of a kind of importance that goes above one's self. The expectation of this kind of work being one that requires such dedication is indicated in the following extract where my interviewee discusses their opinion of the person chairing the project they were involved in. Because the chair did not do the writing for the project, it became considered that their heart was not in it:

Interview, 33:10: and the, though he was very much in charge I never felt his heart was really in it.

ARB, 33:16: Oh right? How so?

Interview, 33:18: Well he wasn't, he wasn't doing any of the reviewing himself, his main thing was saying to you 'you write this,' 'they wrote that'. He wasn't doing anything though, so he wasn't like the sort of participant leader, er, who takes a group along with him. Just, a very clear idea of mine what was needed right from the start 'what was needed is a chapter on this, a chapter on that, a chapter on, on the other,' and that he'd get that done. Which he did, which he did.

The symbolism of the heart is telling: it signifies for my interviewee that those who take academia as a vocation invest themselves in their work. Hearts being in it, labour

of love, and ‘contributing to science or to the world’ are all manifestations of the way that emotions work to create investments in the projects for those involved, connecting them to something larger than themselves or the work itself.

Similarly, strong positive emotions towards others involved acted as the connective tissue of the networks. My interview transcripts are dotted with references to others who are spoken about in highly positive terms.

Interview, #1: [Person] is perhaps one of the most reasonable, decent, and intelligent people I have ever met. It was a pleasure to work with him, and I was always treated as an equal part of the project, and discussion over the work. [Other person] was similarly very bright, personable, and open-minded.

Interview, 48:41: [...] he would try and make sure I spoke and he was just, you know, a nice person, he was just, he asked about, you know he had sort of conversations with you that made it look as though he really wanted to, not he was just filling in time or something, he was sort of old school just, gracious, I don't really know how to sort of, or, you know, just good at, maybe you could call it clubbable or something, I mean he knew how to sort of talk to people and make them feel as if they were going a good job and, and actually I really admired the fact he was so obsessively pedantic about everything, you know, sort of words and things and he would really go into and look up you know the meaning of this word or grammar and all those sort of things, I mean he was really sort of old school academic type, you know, he cared about all those sorts of things really and how it was expressed and what words we should use and, everything you know?

Interview, 13:35: That's right, yeah, yeah, we went to see the person who ran that, who was an absolutely \*amazing\* lady, erm, and, she had written thousands of papers so we went to see a range of people who were recommended to us as the key thinkers in the area.

So strong were the bind of these positive emotions towards one another that sometimes these became the reason for staying involved in a project.

Interview, 48:20: Oh yes, yes. [They] was a wonderful man, he was a perfect gentleman and really really, you know, he was fantastic I

kept going in a way really cause I felt you know, I wanted to sort of do it for him more than anything.

Networks, and their emotional maintenance demonstrates how policy-making is enacted by the people that are involved as policy actors. Policy-making is not conducted by detached, purely rational individuals, but people who are highly emotionally invested in their work and the purpose of their work. Important here is the distinction from mainstream policy network analysis – which although covers the formal and informal relationship of policy actors (c.f. Rhodes, 2006) – continues to maintain an ontological distinction between policy makers and policy. The difference here, is that policy is understood as being enacted through affective, material, symbolic relations that *constitute* the network.

### **DISM and IPED Committees**

Since leaving the ACMD's purview, cognition enhancers have remained absent from the UK policy arena. With the exception of cognition enhancers being put forward as an exemption from the Psychoactive Substances Bill in an amendment which did not get passed, the position of the ISCD – that cognition enhancers were not worthy of policy response – seems to have been the one that has prevailed. However, in late 2016 a report by the ACMD into the Diversion and Illicit Supply of Medicines (DISM) included (an admittedly brief) discussion of cognition enhancers. The report was commissioned as a result of the concern over the diversion and illicit supply of opiate drugs, and whether these were replacing 'classic' drugs (letter from Home Secretary to ACMD, September 2013). Among its key findings were that 'Cognitive enhancers could be susceptible to diversion in the future' (DISM report).

Significant is that cognition enhancers were included in the DISM report at all. Cognition enhancers had come to be identified by the ACMD as something producing apathy in policy terms and after 2012 they were no longer part of the UK policy arena. So why did cognition enhancers emerge? Working groups in the ACMD collect evidence from a large number of organisations and individuals. The DISM working group collected evidence from stakeholders including pharmaceutical companies, police organisations, public health bodies, interest groups and devolved parliaments (ACMD, 2016). There is not a single mention of cognition enhancers in the final evidence pack.

DSIM Working Group Member, 24:16: Exactly, none of the professional bodies we spoke to, from the, you know, Royal College of Physicians, through the Medical Council, the MHRA, and all the other people we spoke to nobody picked these drugs as a big problem area, where they clearly identified many other substances that they did think were problems.

Inclusion of cognition enhancers in the DISM report has its root in the traces left by the genealogy covered up to this point. The DISM working group had access to the ACMD's technical committee's minutes from when they had previously considered cognition enhancers (interview, DSIM Member: 15:55). Two members of the DISM working group had been involved with two or more of the projects that are part of this genealogy (DSIM report; DSIM Member: 16:59). These previous involvements identified experts on cognition enhancers, one of whom was invited and gave a presentation to the DISM working group (interview, DSIM Member: 12:30). Of note, whilst this expert was invited and presented to the DISM working group, their evidence is not contained within the evidence pack.

Whilst cognition enhancers came up as a potential category of drugs for diversion and illicit supply, and it was recommended that they be placed on an ACMD watch list, the orientation of the ACMD being towards recreational drugs informed the DISM working group's identification of cognition enhancers. In particular, there was a focusing on the question of how effective putative cognition enhancers actually were, and the equivocal nature of their efficacy:

DSIM Working Group Member, 22:48: [...] I think they can show in normal individuals and also in elderly people with some degree of cognition impairment, you can definitely see an increase in alertness, and perhaps a decrease in reaction time, with some of these agents, but in terms of helping your ability to remember things, it's not possible to show a clear effect.

ARB, 23:17: no, certainly, there is that issue of what gets shown in the erm, laboratory doesn't really seem to follow through into, real work [sic: world].

DSIM Working Group Member, 23:26: Again we're back to anecdotal evidence.

ARB, 23:28: Yes.

DSIM Working Group Member, 23:29: Saying 'well, when I was revising for my finals I did better because I was taking Ritalin.'

But you know the evidence that Ritalin is more effective at keeping you awake and allowing you the ability to study, erm, you know and is more effective than a strong cup of coffee just isn't there.

We see here how cognition enhancers were moved into the category of non-drugs alongside caffeine within the DISM working group, as occurred with the ISCD. In part, this can be understood as an effect of a rhetorical move that places cognition enhancers alongside mundane forms of 'enhancement'; when compared to everyday activities, the current putative cognition enhancers cannot be considered to have that dramatic an effect. And once again cognition enhancers become something not particularly worth considering from a drug policy perspective.

There is currently (at the time of writing in mid-2018) an ACMD working group on Performance and Image Enhancing Drugs (PIEDs). Cognition enhancers are often classified under the wider category of PIEDs, however the PIED working group is not considering them. Unfortunately this began after my fieldwork had finished, and I have not had responses to further requests for interviews. An explanation for this absence would be speculation. What can be said, however, is that given its absence from the PIED working group, cognition enhancers have once again left the traditional policy arena. The momentary return in the DSIM report was a result of the networks generated in the earlier stages of the genealogy. The same recurring tensions over the identity of cognition enhancers played out, but in this context of the ACMD where the orientation was recreational drugs and harm, with the horizon much reduced so that meliorism could not embody them. This genealogy finishes with cognition enhancers being a non-drug, productive of a policy logic that comes to little more than apathy.

## **Summary**

This chapter has covered the final stage of the genealogy of cognition enhancers in the UK policy arena, and takes us up to the present. Genealogy has no predictive power, so I will not make claims as to the future of cognition enhancer and policy activities around them. What genealogy does provide is a technique for the analysis of history that looks for the movements of power. My feminist psychosocial orientation has taken to the analysis of emotions as productive of power in the enactment of policy-making. These closing stages of this genealogy have shown how positive emotions have operated to maintain the networks of actors that made it



possible to speak about cognition enhancers in the ways they were over their time in the policy agenda covered in this genealogy. Negative emotions also operated within these networks. Emotions similarly worked in the production of the identification of cognition enhancers, moving from a hope-filled object, to one of disappointment, to finally at the current time as one met with apathy.

Over the 15-year period that this case study genealogy covers, cognition enhancers emerged, burned brightly, and quickly burned out into a smoulder with just a few embers left. However, even in this context of apparent failure of policy, it still continues in spatially and temporally 'lose' environments. The policy debates still continue in different contexts – mainly in academic literature – and are still informed by the discursive descent (*Herkunft*) which is traced in this genealogy. In the end, it might seem like nothing came of them: they simply did not come to be as effective as it was believed or suggested they would become, nor were the harms proven to be significant enough to warrant attention. It would be wrong to assume that the reason they are now met with apathy is because this is what they are; Parts I and II argued against such assumptions, further demonstrated in how each identity of cognition enhancers that has played a role in this genealogy has been formed through the use of evidence. It is also important to note that when cognition enhancers are compared to a drug such as khat, a substance whose harms are still to be properly understood and thus it was questionable whether making it a Class C substance in 2014 was justified (Caulfield, 2016; c.f. Thomas & Williams, 2013), it cannot be taken that harm or effectiveness are determining factors for drug policy (see Chapter 1). Rationality cannot account for the enactment of policy; the central concern of this thesis is to centre and expand on theories of identity within social policy.

## **Conclusion**

## Conclusion

### **The Privileging of Rationality in Social Policy**

The argument presented in this thesis has been concerned with an inconsistency between how policy seems in mainstream accounts and what appears in reality. I began this argument by outlining how rationality assumes a primacy within social policy theorisation. By rationality, I mean a system of logic that is meant to operate on the basis of a reference to truth, without interference from ‘the social’. Rationality holds a central status within mainstream accounts of social policy, with policy-making being understood as a rational-technocratic endeavour. Policy failures of the 1960s and 1970s highlighted the disconnect between the stated aims of policy and their outcomes. Rationalist paradigmatic social policy misses aspects of the policy process, is epistemologically flawed and promotes a way of addressing policy which, when achieved, provides no basis that will necessarily result in social good. In response, mainstream policy scholars have developed a body of theories to explain why this occurs. Central to these accounts is that when it became realised that the intention of policy-makers alone was insufficient for achieving policy goals, new models were proposed which retained the dominant logic of rationality as the natural and ideal principle of social policy. Despite the epistemological critiques, rationality has remained the ideal to be sought, and something that is hoped to be reached and therefore aimed for (Chapter 1).

The contestation over the centrality of rationality within social policy arose within the context of UK drug policy post-1997. The election of the New Labour government, with its claims that they were going to follow ‘what works’ gave the notion of rationalist policy-making a renewed relevancy within drug policy scholarship, taking the form of a debate over evidence-based policy. As Kari Lancaster (2014: 948) has written “‘Evidence-based policy’ has become the catch-cry of the drug policy field’. Unfortunately, these hopes were short lived as the critique of drug policy as not being rational grew in the following years. Prominent among these critiques was that the stated logic of policy that drugs were illegal because they are harmful was simply untrue. As demonstrated by the research of Nutt et al. (2007a), when drugs are ranked in terms of harm, there is no correlation between how harmful a drug is, and its classification nor its status as either legal or illegal. From this, and the other negative

consequences of drug policy, a large proportion of the field of drug policy often refers to drug policy as arbitrary and irrational, and calls for rational drug policies. In other words, within the field of drug policy, there is a privileging of the solution as being rationality itself.

A strange occurrence with this privileging of rationality as the solution is that the limits of rationality are frequently identified and noted, yet rationality maintains its privileged position as something to be desired and achieved. Rationality is an orientating ideal, with drug policy scholars persistently returning to technical considerations such as evidence hierarchies, or knowledge transfers, and hence falling back onto a framework underpinned by a logic of rationality. The rationalist approaches maintain their authority by appeal to foundations of reason, outside the influence of non-truth, and here there is a conflation of rationality with positivity, science, empiricism, and reason. The call for rational drug policies fails, in part because it assumes the other side is irrational. However, from the perspective of the prohibitionist, their conclusion are equally logical. It is not that one side has recourse to a truth whilst the other has simply faith (Webster, 2003: 343); both sides have arguments that they consider truth. But as was demonstrated in the interrogation of discourse (Chapter 3), neither has the ability to fall back on a fixed determination from which to ground their claims.

To state that something is arbitrary is to claim that it is random, the result of personal whim, without reason. I have argued that this type of critique relies on an essentialism of drugs; that there is a fixed *thing* of what they are. Essentialist thinking assumes that there is something internal, an essence, to drugs which characterises them as drugs which is absent of external interference. This is important because by essentialising, the interrogation of drugs focuses on the drugs themselves rather than their history to see how they came to be the way they currently are. This discursive concealment of histories of struggles removes and delegitimises lines of analysis and critique. By a foreclosing of history, we are unable to identify the processes and rationalisations that have created legal distinctions between objects which, under scientific classifications, are of the same kind. It has the effect of closing awareness of the social and political dynamics of policy-making, and the world-building inherent in problem construction. It has been the argument of this thesis that the analysis of social policy needs to move away from technocratic rational models of the policy-making process.

## **Identity of Subjects**

The interrogation of the privileged status of rationality in certain strands of social policy scholarship presented two areas for consideration. First, the possibility of a rational mode of policy-making. Second, the possibility to draw rational conclusions from objects. The first concerns the identity of subject. To move away from mainstream models of policy-making with their privileging of rationality, this thesis drew on a body of critical social policy scholarship that uses critical-race and critical-feminist psychosocial approaches to reconsider social identity, human power, and agency ‘to rethink the essentialising terms of ‘mainstream’ social policy and welfare debates’ (Dobson, 2015: 687). Using this body of scholarship, I argued that the identity of the imagined citizenship, and of policy-makers, plays a central role in the logic of policy-making. Theorising social policy in this way also radically altered how the policy-making apparatus can be conceptualised – moving from institutional conceptions of ‘government’, to an assemblage and enactment of ‘governance’.

I took the first element of social policy in which identity plays a central role in the logic of policy-making from Fiona Williams (1995 [1989]). The imagined citizenship comes up against traditional mainstream social policy scholarship which has tended to assume a universal welfare subject. What Williams argues, using critical-race and critical-feminist analysis, is that rather than universalism being the modality of social policy, the ‘organising principles’ of welfare in the UK (and the West generally) have been ideas of work, family and nation, which map to the relations of class, gender and race, respectively. Their historical analysis demonstrates how the development of welfare has always had particular ideas of what is constitutive of the family unit, the nation and its workers. As Williams (1995 [1989]: 149) notes, ‘the welfare state [i]s part of a racially structured and patriarchal capitalism’, and as such these relations should not be peripheral to social policy scholarship but rather should be central to the analysis of social policy.

The organising principles of work, family and nation provide rationales for social policies. Williams’ analysis disrupts mainstream social policy accounts and presents a theorising of the welfare settlement in which the identity of the imagined citizenship (through notions of work, family and nation) has central importance for the logics of policy-making. The imagined citizenship is not a universal subject, but rather

particular. Work, family and nation come to intersect and mutually reinforce one another in the formulation of social policy, the identity of the imagined citizenship benefiting those that conform to this imagining, whilst being a detriment to those it excludes.

The second element drew from scholarship within critical social policy literature turning attention from the recipients of welfare to the designers of policy. Here, social policy analysts informed by psychosocial approaches have challenged the understanding of the welfare subject, rejecting the notion that it can be considered in such unitary terms as rational or pathological, good or bad, but rather that it must be taken as beings that are complex and different in various moments. Over time, this analysis became applied to policy-makers; they should not be taken as merely functionaries in the policy machine, but capable of destructive/constructive agency and resistance also. To understand these multiple identifications, two distinct uses of the notion of identity developed; categorical identity and ontological identity (Taylor, 1998). The former captures those identities we inhabit that we share with others (sex, gender, class, race, etc.), whilst the latter covers the coherent sense of self. The notion of social identity has come to rethink the relationship between the individual and the social; no longer discreet entities but ones that highly inform one another. Shona Hunter (2003) has come to understand this interaction between categorical and ontological as a relational identity.

Central to the conceptualisation of the relational identity is the importance of the emotions in production of subjectivity and constitutive of power. In mainstream social policy, policy makers are largely situated simple as unidimensional beings that act like automatons carrying out the dominant policy discourse, adhering to it because of their positions of power that are afforded to them within the policy-making process (Hunter, 2003: 332). Within rationality identity, the emotions 'operate as connecting devices, bringing together multiple actors and objects into the reasonably temporarily coherent form we think of as the state' (Hunter, 2015: 22). It is through the emotions that 'we' attach ourselves to others (Ahmed, 2004: 50), 'how we feel about others is what aligns us with a collective, which paradoxically 'takes shape' only as an effect of such alignments' (p.54). It is through the emotions that people invest or distance themselves in ontological and categorical identities. For policy practitioners, relational identity is at play at the moment of policy design and implementation. When

thought about in this way, it gives us the idea of policy as an enactment: it cannot be understood as simply being, but rather something that needs to be performed and brought into being.

The concept of relational identity to account for the processual, fluid and constantly in flux nature of identity emerges through the interplay of ontological and categorical identities. The extension of policy as enactment and identity as relational is that many more actors need to be understood as involved in the policy process. Policy involves not just those that 'dictate' policy, but service providers, commissioning groups, QUANGOs (quasi-autonomous non-governmental organisation), lobbyists, ghost writers, and others including academic experts recruited to provide expert opinion. All these policy-subjects can be considered policy-makers. When 'policy-maker' is expanded to include other policy-subjects we start to understand social policy as an assemblage.

Multiple actors (both subjects and objects) are part of an assemblage which constitute the enactment of policy and maintains it in a form that makes it far more fluid than its usually rigid conceptions invoked in certain tendencies within strands of mainstream social policy scholarship. Policy as assemblage and enactment moves us away from foundationalist and essentialist assumptions of social policy and the policy-making process. Even the term 'policy-making' which is so common within certain strands of social policy scholarship becomes problematic as it implies an ontological distinction between policy-makers and policy that cannot be maintained under the notions of assemblage and enactment. Policy no longer can it be taken as a monolith, but as a temporary assembled enactment. It is within this scholarship that this thesis makes an original contribution by extending this critique of mainstream social policy analysis to include the identity of objects.

### **Identity of Objects**

My extending of non-essentialist accounts of the policy-making process has been informed by a decolonial reading of discourse theory (*à la* Said, 1980 [1978]; Hall 1986; 1992; Sayyid, 2003). The necessity of the category of discourse emerges in consideration of the conduct of historical study, and how to excavate meaning and understanding without risk of imputing the sensibilities of the current period onto those in the past who would not have those intentions available to them (Skinner,

1969). This problem of presentism points toward discourse because it alters the way that the nature of language is understood. Rather than language being simply a nominal act, it is an unfixed system of signifier and signified (Saussure, 1959 [1916]). The implication of an arbitrary determinant demonstrates the lack of essence to 'things' and their 'correspondence with reality' (Rorty, 1982 [1981]). Despite this, it is important not to let the category of discourse be taken to imply that meaning is free-floating and relativistic when the nature of contingency comes into play as demonstrating the centrality of identity to objects as something that attains its reasonably coherent form.

In contrast to progressivist histories that proceed from the perspective that history develops linearly towards the progress and fulfilment of society and the Marxist-informed critical histories which reject this positive reading yet still subscribe to a teleological orientation to history (Dean, 1997 [1994]), this thesis has adopted a 'critical and effective' history. It is effective because it explicitly avoids the imposition onto history of the meanings and understandings generated by mere philosophical reflections. Whereas with the others there is a search for a singular identity of the object or idea which becomes more fully realised as time goes on, this 'new' history works to trouble the given, to reject origin and end, and to maintain the questioning when others would be of the mind of having found answers. Rather than aiming for historical analysis to discover the singular unity, the aim is to challenge sedimentations that may otherwise conceal relations of power.

In the conduct of history, because we stand as observers in the current moment and will thus hold the current plethora of understandings of that idea, we are at risk of projecting our current understandings of an object or idea into the previous moments of that idea. There is a tendency within the work of historians to seek an ahistorical spirit of an idea. In this way, the idea itself remains untouched; it exists in its complete form and we have just been moving to an ever-closer illumination of the concept. Given this, an internal coherence both to the idea itself and of its journey into its more fully realised state is given primacy to the extent that contradictions become erased either by excessive generalisability or by being ignored entirely (Skinner, 1969; Foucault, 2002 [1969]).



These problems emerge from a position which considers that meaning can be derived from texts themselves; that we can simply collect the documents which testify to the idea with which we are concerned and from those alone elucidate the meanings which they were meant to portray. This, however, runs the risk of ‘historical absurdities’ in which previous authors are assigned meanings or intentions that would simply not have been available to them at the time. A common alternative for historians is to look for meaning from the context in which ideas or works were circulating. But this in turn can result in other historical absurdities such as where the use of an idea is claimed to have been something other than what the user of the idea actually said. With a focus on meaning from context, we find that changes in meaning of thought are taken to be mere reflections of the changes and developments in the social context in which the ideas circulated (Skinner, 1969).

These problems of presentism have been informative for the historical analysis of the case study of cognition enhancers in the UK policy-making context. However, care had to be taken not to mirror or inflect, the very same absurdities which we have discussed above. Interestingly, this was a problem of presentism of a negative *thing*. During the period in which cognition enhancers were on the policy agenda, their future occurrence was presented most definitely as explicit, unambiguous and foreseen in a way that, if we were now living in a culture of ‘neuro-cosmetics’, we would be lauding those involved for their brilliant foresight. However, the fact cognition enhancers seem to have remained marginal at best can now far too easily turn into an historical absurdity where the proposed future was never going to occur. The true intentions of the author cannot be uncovered solely by reference to the text itself, nor purely by reflection on the ‘social context’ of the time in which it was written.

It is with the problem of determining meaning that the category of discourse becomes so important. Discourse is about the way we understand the nature of language. The common-sense understanding of language is that words simply name their corresponding thing what it is. Under the progressivist paradigm of history, when the name of a thing changes, it is simply a natural progression towards a greater clarity of understanding of the initial thing, and as our descriptions of the world have evolved we have been getting closer to describing reality as it truly is. In these histories, these things lay hidden, waiting to be discovered and fully realised. However, with a

conceptual turn towards history as generated under a critical and effective history, we move away from essences and begin thinking in terms of historically contingent movements. No longer can it be considered for there to be a singular thing existing in the past but being treated different at one time compared to another. What there is in its place is a position that takes different historical moments as constitutive of different things which come to inform our current conceptualisation of that idea or object.

This is because, rather than language emerging from reality, the relationship is actually the other way around; reality emerges through language. If it was true that language emerged from reality, then language would be fixed in relation to reality. However, 'if words stood for pre-existing concepts, they would all have exact equivalents in meaning from one language to the next' (Saussure, 1959 [1916]: 116). But because they do not, we are forced to confront the fact that concepts are made for words to stand. What is linked through language is not a thing and a name, but rather a concept with an associated 'sound-image'. The sound-image (a signifier) invokes the concept (the signified), and this relationship works also in reverse. Together in this relationship they form the sign, which itself may be a signifier in a second-order sign. Without one another there is merely an uncommunicative noise or a thing that does not exist within that linguistic community.

There is no reason why the signifying sound-image is the one linked to a given concept in any instance. This does not mean, however, that language is free-floating. Although the sign is arbitrary, we are not able to use words without the community of meaning in which they work as sign; otherwise would be to speak nonsense. Either the word would simply be a sound which the other would not understand, or there would be a concept signified which could not be interpreted by those who received it. Discourse is the systems of meaning made possible in the world, which in turns produces the contingency for what can be said. Discourse, then, provides us with the conceptual tools to understand why meaning cannot be taken as a direct translation from a pre-existing reality. Reality does not pre-exist; it is made in discourse, and discourse changes over time, which in turn implies that reality itself is not fixed but historical also.

With ideas and objects therefore being products of history, rather than pre-existing, there is the need to do away with and then replace a whole range of notions that

underpin the orientation towards history. Foucault (2002 [1969]) identified the notions of tradition, influence development and evolution, and spirit, which were particular to the conduct of progressivist history. These notions support the basis of the envisioning of history as a continuous lineage. However, with their rejection we move to a discontinuous history; events do not proceed in a procession that is in motion, but discrete instances that are made and as such could be made otherwise.

A new body of notions are required for engaging with a critical and effective history. Here we encountered three different concepts that are relevant to the study of history: *Erfindung* (invention), *Herkunft* (descent), and *Entstehung* (emergence). The latter two are relevant for the technique of history. The descent is a means of tracing, branching off at various points any of which could have caused the idea or object to take a different form or identity, whilst emergence is the recognition that we are not searching for the origins, but the moment at which the idea or object can be considered to have taken on the form or identity that distinguishes itself from other forms or identities. Invention acts as our constant reminder that ideas and objects are not pre-existing essences waiting to be discovered, but rather that they are made. Not necessarily by intention or by choice, perhaps by accident, but by the hand of ‘man’ nonetheless. Things do not exist, waiting to be discovered or to be fully realised; rather, they are brought into being. There is no ability to make reference to a concrete object (physical or ideational) which is capable of determining what language should be, language is not able to be more or less coextensive with reality.

Discourse replaces the ‘correspondence with reality’ assumptions of language, but it is not merely linguistic, nor can it be altered simply by volition. Discourse is a *logic* for speaking of the world. These logics are shared among those who employ a given discourse, in turn providing a shared way of making a topic knowable. Discourse is in a sense, *sui generis*. It requires a contextualisation of the language games at play in a given context. How is it possible to speak of one thing at one time in one place but not in another? In this way, discourse links power and knowledge. Discourse, or a discursive field or formation, is how knowledge is made in the world. It articulates *how* we can know about a given thing and the proper ways of communicating this knowledge. In other words, discourse is as much about what can be said (and inversely what cannot), what does not need to be said and that which does, and the rules that

govern these that exist at a level of the social rather than inherent within the rules of grammar or based in a final ground of truth.

Discourse is a concern with the ‘conditions of possibility’ (Laclau, 1994: 2), not simply that of what is said. It is through discourse that objects and subjects are brought into relationship to one another. Discursive articulations attempt to position objects through chains of equivalence and difference to other objects. The decentring of power means we cannot place the occurrence of events as being the result of power enacted by individuals or of grand narratives or the spirit of the times, but as occurrences made manifest through assemblages of contingencies that made possible the particular specificity of the given event.

If an object is without a fixed determination between its signifier and signified, as asserted in Chapter 3, then the production of the determining relationship must be contingent on that linguistic community that has come to the current moment of the sign, and this contingent articulation is the hegemonic formation of an identity. If the identity of an object does not exist within the object itself, and therefore must be made, identity can only be relational and negative. This is the matter of contingency which is the result of articulations that provide overdetermined objects their temporarily stable and coherent formations as a given identity. By contingency, I refer to the language games that produce ideas and objects as singular and specific to themselves. Identity is the product of ‘fixing’ an object, or at least making the appearance of a fixedness. A discursive theoretical approach centres the identity of objects, highlighting the political rather than rational determination.

### **Destabilising Cognition Enhancers**

To demonstrate the identity of objects and the centrality of their identity to the logic of policy-making, I outlined a discursive analysis of cognition enhancers in academic literature. I did this by making three analytical moves. First, I demonstrated that cognition enhancers did not pre-exist their classification (Chapter 3, §2). Here I focused on attempts within the research literature to fix the category of cognition enhancers in two main forms: in relation to their chemical properties and effects (an internal determination); and to fix them to an activity of use by users (an external determination). Interrogation of these two modes of thought found that, rather than a singular object of ‘cognition enhancers’, there is a multiplicity. The search for fixed

internal and external determination resulted in either an empty category or one so expansive as to be totalising. Nothing can be unequivocally classified as a cognition enhancer, similarly expansive classifications encapsulate activities that are closer to medical or recreational use, therefore losing its specificity. In either case, the signifier of ‘cognition enhancer’ becomes redundant. In other words, we find an overdetermination that is unable to maintain its specificity under internal or external rules of formation.

The second movement (Chapter 4, §2) highlighted the contingency that is at play in the categorisation of cognition enhancers. Here I was concerned with understanding why it is that if cognition enhancers are indeed overdetermined as per the first movement, it remains possible to talk of cognition enhancers as a *thing*? This was a concern of the identity of cognition enhancers. How was it they came to have a temporary and reasonably coherent form such they could be considered an entity at all? The terrain this occurs in is the bioethical and philosophical discourse. The specificity of cognition enhancers emerges in the problems that are considered to appear because of them. At the core of these problems is the centrality of the human; the assumption of a universal human which it to be surpassed. However, and most relevant in the final analysis, is how this problematisation of the Human is not universal but is particular; it is animated by an assemblage of whiteness, ableness, heteromascularity, class, and so on.

The final move (Chapter 4, §3) was to indicate how this specific contingency – the identity of cognition enhancers – is responded to differently to that of other ‘drugs’. This was achieved by a turn to the debates about how to properly respond to this ‘new breed of drugs’ and the specific problems they raise. Cognition enhancers, as an enhancement technique that troubles the limits of medicine’s legitimating logic of treatment, are unique in that their use is not deemed illicit. The predominant response is one of positivity towards cognition enhancers used explicitly for enhancement beyond treatment. It is from this that cognition enhancers can be understood as occupying an identity position as a separate category of drugs, one that disrupts the licit-illicit logic that is mediated through the moral legitimation produced by pharmaceuticals.

Analysis of cognition enhancers in this manner was necessary for two reasons before the beginning of the analysis of case study. Firstly, demonstrating that cognition enhancers are not a self-evident object means that in the analysis of the genealogy of cognition enhancers on the UK policy agenda, it becomes clear that a search for the ‘truth’ of cognition enhancers cannot be sought for there is no such thing that can be found. The implication being that it is not a matter of what was or was not ‘true’, nor that that the ‘correct’ policy could have been developed if only this truth could have been excavated. Secondly, it makes the theoretical link between the identity of objects and the logic of social policy-making which this thesis seeks to contribute to a body of critical social policy scholarship that considers the role of identity in policy-making. What was left to be considered is how the identity of the three different elements – imagined citizens, policy-makers, and objects – interact with one another in the production of policy logics, to which the case study was used.

### **The Genealogy of Cognition Enhancers in the UK Policy Context**

Outlining of the genealogy of cognition enhancers in the UK policy context demonstrated the way that the interaction of changing identities of cognition enhancers, policy-makers, and imagined citizens, was productive for differing policy logics over the period covered by the case study. This was significant because it demonstrates that no one identity is determinant of policy logics – each element must be considered when analysing the relationship between identity and the logic of policy-making. It also demonstrated the importance of emotions in being productive of these policy logics, providing orientations towards different horizons, the way policy documents work to conceal the relational, discursive, affective, social, and cultural dynamics of policy-making, and how the networks formed in policy-making create self-generating narratives which are maintained through positive emotions.

### **Interaction**

The principle argument put forward in this thesis has been that the identities of imagined citizenship, policy-makers, and objects, shape the logic of policy-making. This is, policy is structured with ideas of who it is the policies are intended to shape, the policy-makers drawing on their relational identities in the design and delivery of policies, and what objects are considered to be, generate logics of how to respond to them through policy. The use of the original case study of cognition enhancers in the

UK policy context demonstrates how identity and the logic of policy-making works in practices. As identities changed over the course of the genealogy, so too did the policy logics that were considered the appropriate ones to pursue. Importantly, however, is that these individual identities interact with one another in the logic of policy-making. The identities of each also played a role in shaping the identities of the others.

In the Foresight project, cognition enhancers took on an identity which posited them as ‘a new breed of drugs’, one that was capable of producing significant changes in the mental capacity of those who used them. They were envisioned to be so powerful that they would, if they were to be embraced, alter the very nature of British society. We would become a nation of creative nomads, prompting an economic revival. The identity of cognition enhancers became bound up with the potential identity of the imagined citizenship – they would be a tool for which to actively shape the identity of the latter – and the identity of the policy-makers involved, those scientific experts were to be the ones who would enable it. It is also significant that, of the four futures scenarios, those that were positive were the ones in which the imagined citizenship came into alignment with the viewpoints of the policy-makers. The question over the logic of policy, then, was whether to pursue this future or not.

The Academy of Medical Sciences’ review was to take a more reserved position on cognition enhancers. The use of public engagement was to shift the identity of cognition enhancers closer towards recreational drugs, with the public viewing them sceptically. Similarly, the public was less able to engage with the possibilities of cognition enhancers because quite simply they were not something that they were used to. This highlights the fact that, at this point, cognition enhancers were still not a reality, only a possibility. With no obvious drugs being developed that would be significant cognition enhancers, they became ‘a rather dull topic’. And with this, the policy recommendations were limited to recommending that stakeholders consider the impact of cognition enhancers as potentially a form of cheating, and for the Advisory Council on the Misuse of Drugs to monitor for potential harms of use.

The topic of cognition enhancers then reached the ACMD and the follow-on ISCD working groups. At this point, the policy-makers involved were orientated towards drugs as recreational, and therefore in the mind-set of whether cognition enhancers

were harmful or not. This had two effects on the identity of cognition enhancers. One, the distance to the horizon was much reduced, and their focus was on those putative cognition enhancers that were available at that current time. Two, they were placed closer in relation to recreational drugs as a category, and judged in the relation to them. This latter effect resulted in cognition enhancers being identified more closely with non-drugs. They were put in a system of equivalence and difference with that of caffeine, because there was cynicism as to the extent to which putative cognition enhancers were actually able to enhance cognition substantially more than a strong coffee. With this identification, the policy logic that emerged was effectively that nothing needed to be done.

At about the same time as the ISCD, two separate learned society workshops were convened, and reports published. Here, cognition enhancers took on an identity akin to that which came to the fore with the Foresight project. Why this was the case was a result of the dynamics that were ongoing over this entire period. Whilst the identity of cognition enhancers at any one stage was presented in relatively stable terms, throughout the genealogy there was always tension over their identity which was concealed by the policy documents, and which one ‘won out’ at any given stage was in part the result of the identities of the policy-makers involved, and the imagined citizenship. Part of this identity work – the work to produce identity – was under the conditions of the emotional orientation towards the horizon that was at play in each project.

### **Emotions and the Horizon**

The emergence of cognition enhancers on the UK policy agenda has its roots in the Cambridge University Government Policy Group, and its ‘Drugs of Addiction’ seminar. Although this seminar had nothing to do with cognition enhancers, the seminar – attended by many of the key policy-makers that would go on to participate in the main projects that constitute this genealogy – was justified by developments in brain science and the potential breakthroughs these could generate. Throughout this genealogy, the horizon and emotions were intertwined with the conceptual space within which the identity of cognition enhancers (and of the imagined citizenship, and of policy-makers) were able to occupy. The more policy-makers were tasked with considering the distant future, the more those horizons were opened to being filled



with positive emotions, and as the distance to the future considered diminished so too did the meliorism that motivated the positive identifications of cognition enhancers.

This can be seen in how in the Foresight project, the positive emotion of meliorism that circulated permeated the discussions of what the future may hold. When the horizon was distant, meliorism was allowed to come forward and produce an imagined citizenship that was considered optimistically, and within this cognition enhancers were able to be placed as part of the ensemble. A hope for a new dawn. The identities of the policy-makers were to be the architects of this future, they were the ones whose expertise would make it possible. Identity is important here, because it was not these policy-makers specifically that would make it possible, but those with whom their shared their identifications as professionals with expertise as scientists.

As the later projects were tasked with considering the future in shorter time scales, the opportunity to consider the imagined citizenship changed. The inability of the public (a form of an imagined citizenship) in the Academy's public engagement to engage with a distant horizon reduced their possibility to identify cognition enhancers as a potential source for the positive shaping of society. The Academy's terms of reference were far different to those of the scientists in the role of policy-makers. But even for those in the role of the policy-makers, the shorter distance to the horizon had implications for the identity of cognition enhancers; previously, new developments in knowledge would produce cognition enhancers, but at the AMS it was considered that with nothing in development they were not going to arrive in the mid-term. They took on a non-identity, or one characterised by disappointment, and a corresponding policy logic emerged. The failure of cognition enhancers to match up with the identity they held in the previous project resulted in disappointment. By the time of reaching the ACMD and the ISCD, the horizon was even closer, and here it became a case of apathy. Nothing need happen in response to cognition enhancers because the difference between them and non-drugs was considered minor.

This is not the case of the identity of cognition enhancers becoming more realistic, not that a closer correspondence with reality is necessarily possible. The importance of the distance of the horizon on the emotional orientation towards cognition enhancers can be understood with reference to the learned society reports that occurred at the similar time of the ISCD. The learned society reports are notable for

two points relevant to the current discussion. Firstly, the experts involved with the learned society projects were orientated to think in terms of the potentials of science and technology and what they can achieve, rather than in terms of the policy logic of (recreational) drugs and harm. Secondly, their orientation towards the future was one that allowed for much greater time and therefore the opportunity to enter their discussions. Hence why the identification of cognition enhancers as something potentially capable of changing society occurred at both the Foresight project, and the learned society projects. The meliorism that came with a more distant horizon gave a vitality to cognition enhancers that was productive in ways not possible with a closer horizon.

### **Documents and the Concealment of the Dynamics of ‘Doing Policy’**

How the changing identity of cognition enhancers has been traced in the previous two subsections risks implying a false image. It might appear as though at each stage internally to each project, the identity of cognition enhancers was rather singular, although different at each individual stage. However, this is not the case. There was no consensus over what cognition enhancers were. That there seems to have been a consensus is indicative of the way that policy documents conceal the actions of policy-makers that form part of the assemblage of the relational, discursive, affective, social, and cultural dynamics of policy enactment, in sometimes conscious and sometimes unconscious ways. The production of an apparent consensus occurs by presenting objects as a singular and coherent entity, and policy documents conceal the work of ‘doing policy’ by policy-makers through erasing the heritage of authorship by not crediting individual contributions, instead using organisational authorship, and because the documents do not include the lived-out processes by which the documents achieved their final status.

As Shona Hunter (2008: 508) argues, documents define the problems that they come to encounter, ‘they judge, form networks, communicate and work performatively, generating symbolic attachment and identity investments as they travel across time and space’. Policy documents do the work of connecting diverse elements into an apparent whole, coherent and stable. This can be seen in how the Foresight project created an image of cognition enhancers as ‘a new breed of drugs’ despite there being those who considered that they might not actually occur in a form which would closely

match the one being put forward in the final documents. Similarly, as occurred with Academy of Medical Sciences' review, the consideration of what cognition enhancers were differed substantially between members of the Working Group. In both cases, such contradictions and ambivalence were concealed such that cognition enhancers appeared as a singular, coherent identity.

Policy documents conceal more than just the multiplicity of objects. As this case study demonstrated, policy documents also conceal who does what work, and the emotional dynamics that underpins the work being done. It was within the Academy of Medical Sciences review that the work the policy documents do in concealing the relational, material, discursive, affective, social, and cultural dynamics involved in the production of policy-making was made most clear. Here, disappointment drew out how feelings of who was included and excluded were made manifest in the interactions of the various members of the working group. These disappointments cannot be read from the documents, becoming accounted for only through the narrative-informed interviews. This further highlighted how the heritage of authorship was difficult to determine from documents, in part made apparent by the challenge during the fieldwork to determine who the key actors were in this genealogy. The contributions of some apparently over-stated, but more significantly for others their substantial contributions were undervalued. Use of organisational authorship and its contribution to the concealing of the heritage of authorship, also points to significance of networks.

## **Networks**

The task of trying to determine the heritage of authorship within the archived documents (in their extended sense) to identify key potential participants revealed an interesting aspect of the body of policy-makers in this genealogy: the highly networked nature of those involved. This was somewhat surprising from the perspective before the fieldwork, as only three individuals (all involved with the Foresight project) seemed to be involved with more than one project. However, as the archaeology was undertaken, it became clear that the number was greater, and this further increased as other projects and activities were included into the genealogy (i.e. the CUGPOP seminar, and the learned society reports). There were three characteristics to these networks that emerged during the analysis. One was that the

network was highly interconnected, and that involvement in these projects was in part predicated on being part of the network which resulted in the same policy-makers being involved at multiple points throughout. This then resulted in similar discourses being repeated between projects, and these networks were maintained through positive emotions, both towards the work being conducted and of one another.

- *Interconnectedness*

The highly interconnected nature of this policy-making network was made evident by the repetition of the same names within the documents themselves (not as authors of the principle documents, but appearing within and on supporting documents). Furthermore, in gaining narrative accounts from my interviews, participants often discussed how their involvement with projects occurred through their connections to others. This was made increasingly evident in the fieldwork, as participants would frequently recommend that I spoke to others, with a small number of names being prominent. The emergence and maintenance of cognition enhancers was only made possible by the networks that enact them. It is notable that the earliest event this genealogy traces back to – the CUGPOP seminar – involved many who would reappear throughout the genealogy. The emergence of cognition enhancers onto the UK policy agenda is not a clearly defined occurrence, but attempts at demarcating them illustrates the highly networked arena which this genealogy has excavated. The early moments of this genealogy situates the policy-makers over this period as scientific experts, especially of neuroscience, that acts as an identity of policy-makers to which will later interact with the identities of the imagined citizens and of objects.

Whilst there are those who were unsure of exactly why they were invited to be involved in any one of the various projects this genealogy covers, there was a significant amount of indication that involvement occurred because of their connections to others. This might have been simply by knowing someone else involved, through contacts, a usual collaborator, or a colleague of a contact. This is not to suggest that people were not involved on the basis of merit, only to highlight that the network was highly interconnected. Having a connection to the network increased the chances of being involved in a project, whilst it could also occur that if outside the network one could be deemed unsuitable (see Chapter 7). As people became involved, the more they became involved as part of the network as experts on

their topic, and the more likely they were to be invited to participate in a future event. This is one of the contributing factors to the repeating discourses over this genealogy.

- *Repeating discourses*

As policy-makers were able to play an active role in the differing identifications of cognition enhancers, they in turn became identified as experts on cognition enhancers. Their developed identities resulted in their invitation to contribute to future projects, which would then cite the previous projects as a foundation for the claims of the next. This practice was itself hidden by the concealment of the dynamics and networks inherent in policy documents. The effect is discourses being reproduced and maintained by the network that generated it in the first place. None of this was with malicious intent, it was simply an outcome due to the character of the networks. The networks were produced by and reproduced particular discourses, such as that cognition enhancers were new, rapidly evolving, and were poised to change society and required attention. Which in turn is then reproduced the relations which constituted the networks. This is because the networks operated within a system that demanded new, exciting, and 'impactful' discourses. It encouraged more niche accounts, which were then self-reproducing as they become the evidence base for the next project to draw on.

The displacement of cognition enhancers from the traditional policy apparatus post-2009 saw them diverge as an object. With the ISCD, they moved towards a categorisation of recreational drugs, with them moving to a 'non-drug' identity equivalent to caffeine. Whilst with the two Society reports they became subsumed within a categorisation of a grouping of technologies and strategies. The expansion of cognition enhancers into the category of cognition enhancement occurs through the wider discourse of cognition enhancers. This rhetorical move is important because it is what has kept the cognition enhancers discourse alive through the networks that diverged from the ACMD and ISCD to the two learned Society reviews. When the discourse on cognition enhancers split between the ISCD and the Society reports, those experts with a positive identification of cognition enhancers ended up at the latter, whilst those with a more negative identification of cognition enhancers were involved with the former. Each identification was present early in the Foresight

project, as were many of the policy-makers who were active in the latter stages of this genealogy, their presence maintained and reproduced by the network itself.

- *Positive emotion as connective tissue*

All this was underpinned by positive emotions, which acted as the connective tissue of the network. This can be understood as involving two processes. One is a personal attachment the policy-makers involved had towards their work. The projects that form this case study of cognition enhancers on the UK policy agenda were large projects, taking many years to complete and requiring extensive amounts of work on the part of those involved, often without financial reward. To sustain this involvement requires a personal investment by those involved in their work and the purpose of that work. The second is how relationships were maintained through positive emotions. They kept the network together by investing positive sentiments between those involved.

Here, I drew on the notions of science as a vocation because it captured the sentiment expressed by many of my interviewees in terms of their work as a duty – to country, discipline, or the world itself. Emotions here worked to invest those involved in their work, the idiom ‘labour of love’ was notable, because the work comes to take an importance that existed on a level above one’s self. These positive emotions maintained peoples’ investments in these projects. The emotional connection of policy-makers and their policy-making work has been noted elsewhere (see Neal & McLaughlin, 2009). But further to these accounts, positive emotions built strong connections *between* the policy-makers; accounts are strewn with high praise for one another. Sometimes, the positive emotional connections were the motivation for staying involved with the project by those who did not necessarily feel strongly accepted into the network. Policy-making is not conducted by detached, purely rational individuals, but people who are highly emotionally invested in their work and the purpose of their work.

Networks, and their emotional maintenance, demonstrate how policy-making is enacted by those that are involved as policy actors. Important here, is that policy is understood as being enacted through affective, material, symbolic relations that *constitute* the network. This ontologically orientated approach opens up further questions of why and how processes of concealment (intentional and not) as well as coherence takes place in policy making; how this is reflective of unequal social orders

and inequalities; and the scope for change and resistance via policy making. I now turn to these questions in my concluding remarks.

## **Concluding Remarks**

At the core of this research project has been the argument that identity is a political rather than a rational entity. As discussed in the Introduction, this work is informed by the argument that politics is concerned with creation of identity. If, as I have tried to argue in Chapters 1 to 4, identity is central to the logic of action, then we are naturally led to understand that the political has primacy in the constitution of the real. The body of scholarship which this thesis has drawn on and is a contribution to highlight the politics of the imagined citizenship and policy-makers. With my discourse analysis of cognition enhancers in Chapter 4, and my original case study in Part III, I have added to this the importance of objects to the logic of policy-making.

Social policy is important to theorise in manners that make possible the increasing of the potential for engagement with its formation, because social policy is productive of social relations (see Chapter 2). The politics of who is included and who is excluded in social policy is not merely about equitable distribution, but a matter of who is considered a part of the nation itself. Rationalist accounts of the policy-making processes are unable to account for the particular because it assumes the universal. In this thesis I have argued how this is fundamentally flawed, have developed an alternative theorisation, and have used a case-study example to explore its dynamics in practice. In the process, I have demonstrated that, from an antifoundationalist perspective, identity informs the logic of policy-making.

I want to assure anyone who reads this thesis that I in no way wish to imply that those involved with this history have been misguided, naïve, biased, or anything along those lines. Far from it. I have huge respect for everyone involved in this history, and those included by association. These individuals, whilst I have referred to them as policy actors, have pretty much all in the main been highly critical of current government drug policy, and policy-making more generally. Their specific interventions into the discourse of drug policy have been critical in me reaching the current point that this work has come to. I want my work to be taken not as a critique in a destructive sense, but rather as a sympathetic critique that wishes to continue the positive contribution made by that which it analyses.

Furthermore, there is part of me that feels that my participants do to some extent agree (consciously or not), with my argument:

Interview 23:01: I think none of us realis(ed), none of us could have thought that government could continue on a, it's self-destructive strategy with drugs. I mean I think we all thought eventually, you know, science was going to win, in fact we didn't realise it was all about politics and science was just an irrelevance. I mean I really I think, in fact that's a really good point you make, well you're implying, the weakness of that whole thing was that there wasn't a chapter on politics. [laughing] Because it's the politics which has dictated drug policy, not science. And it always has and probably always will, until the public rise up against

Of course, the nature of politics invoked here is different to the one advocated in this thesis, but it still points towards an increasing awareness of the importance of the political over the rational.

What I have attempted to do is reframe policy-making so that this tension which the quotation indicates is brought to the fore; to engage in an alternative literacy of policy-making, with the hope of moving towards an engagement with the policy-making process which can be more fruitful. As scholars and activists, we can proactively play a role in the changing identity of the imagined citizenship and of objects. We can participate in a collective effort to re-fix the identity of who we are as a society, and what the objects are that we refer to as recreational drugs. Evidence that this is possible has been seen recently with the shift of towards cannabis becoming considered medicinal in some parts of the world (Schlussel, 2017), although there is the argument that this has simply codified the distinction between legitimate and illegitimate substances (Taylor, Buchanan & Ayres, 2016). Intervention on the identity of policy-makers is harder, although the expansive understanding of what constitutes policy-making means that activists and scholars can seek routes to be involved in the policy-making process, influencing the identities of the imagined citizenship and objects. This thesis multiplies the sites of contestation over identity and how they can influence the logics of policy-making, increasing the potential for democratic intervention.

However, what this thesis has not demonstrated is whether this theorisation actually increases the ability to actively influence policy-making, or if it merely demonstrates that an increased number of locations are required to be engaged with. It is possible that intervention at any one given location is capable of instigating change, in which



case it would be that I have identified a new avenue for the participation in policy change. However, the corollary of this would be that any change gained would be fragile because it would be as similarly possible for policy move in the opposite direction. It is also important to note that altering identity is not easy; what appears ‘as is’ is the result of historical contingencies that have often made the current state appear normal and naturalised. To an extent, identity has its own inertia to change that must be overcome, and this can only be done collectively; one cannot simply change an identity by volition.

Within this work, I have focused upon the inter-subject/object relations that are constitutive of policy-making, drawing upon a range of literatures. Thus far this has been done largely in general terms. Moving forward these dynamics should be explored more through the concept of ‘relational politics’ as developed by Shona Hunter (2015). Previously, I noted that how relational identity gets played out in practice is a result of relational politics. Hunter has taken this conceptualisation to explore how:

‘the state comes into being through the everyday processes of relational debate that I call ‘relational politics’. By relational politics I mean the everyday actions, investments and practices of the multiple and shifting range of people and other material and symbolic objects that make up the state’ (Hunter, 2015: 5)

Connecting this to Hunter’s (2003) concept of ‘relational identity’, relational politics links social policy to categories of hierarchical value (such as class, race, and gender). The implications of relational identity provides space for agency and offers scope for change and resistance via policy-making. Hunter’s ‘relational politics’ provides a further theoretical expansion of the state that enables future investigation of how processes of concealment and cohering as identified within this thesis take place in policy-making, and how these are reflective of unequal social orders and inequalities (and how we can resist these).

It is also possible that this theorisation demonstrates that it may be harder to influence policy than originally thought. For mainstream social policy scholarship, the ability to influence policy was about evidence and getting it in the right form to the right people. In the critical social policy scholarship which I have drawn on, we have two sites capable for influencing policy change. In this thesis I have increased this to three to include objects. And if, as I have argued, these three interact with one another in

the logic of policy-making, is it not possible that all three need to be in alignment for meaningful policy change? And if so, how does this dynamic work? Are there gradual shifts of all three that in the end create change, or does one drag the others along with it? This is where future research should lead, following on from this work

Whether the expansions of the centrality of identity in social policy to include objects does indeed increase the opportunities for policy intervention, or simply highlights that the barriers to changes are greater than we usually consider, the intervention of this thesis is useful. It is hoped that the more extensive conceptualisation of social policy presented in this work – one that accounts for the assemblage of the relational, discursive, affective, social, and cultural dynamics constitutive of policy enactment – provides a clearer understanding of the terrain on which attempts at engaging with policy is conducted. Taking this contribution seriously, we can no longer allow for tacit acceptance of the impossibility of rationality whilst still keeping it as an ideal that is desired to be achieved (as occurs within certain strands within social policy, as covered in Chapter 1). Policy cannot be conducted and judged in terms of a search for a foundation, but must be done with a persistent reminder of our productions of identity and their influence on the logic of policy. Policy-making is not rational, it is political. The notion of ‘political’ adopted in this thesis is that the contingency of subjects and objects is the hegemonic outcome of the (political) contestations (Laclau & Mouffe, 2014 [2001]) which make them appear stable and coherent.

This thesis has been an engagement with a problem that I have been trying to understand since I was a teenager who picked up a discarded newspaper on a bus. How could it be that such an illogical policy could continue in the face of such clear evidence that it was not based on the facts? The problem, I have argued in this thesis, is that rationality and rational argument appear to have minimal effect on social policy. This is a contradiction of the professed ideals of the system of social policy. Whilst this problem began with a concern over drug policy, it is in no terms unique to drug policy. Rather than simply bemoan drug policy, and social policy more widely, for failing to hold to its supposed ideals and join the attempts to advocate for such a state, this work has been concerned with how to move beyond rationality as a privileged notion in social policy. To address this problem I have detailed theoretical arguments that challenge the possibility of truly rational policy-making, interrogated this theorisation through an analysis of the case study of cognition enhancers in UK

policy-making context, and explored how they operate in practice. This thesis has argued for a move towards the political and technical appreciation for the centrality of identity as a determining logic in policy-making.

## Bibliography

- AAN (American Academy of Neurology). (2009) Responding to Requests from Adult Patients for Neuroenhancement. *Neurology*. **73** (17) pp. 1406-1412.
- Acevedo, B. (2007) Creating the Cannabis User: A Post-Structuralist Analysis of the Re-Classification of Cannabis in the United Kingdom (2004–2005). *International Journal of Drug Policy*. **18** (3) pp. 177-186.
- ACMD (Advisory Council for the Misuse of Drugs). (2005) *Further Consideration of the Classification of Cannabis Under the Misuse of Drugs Act, 1971*. London: Crown Copyright. Available at: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/119124/cannabis-reclass-2005.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/119124/cannabis-reclass-2005.pdf)
- ACMD. (2010) *ACMD Annual Report, 2009 to 2010*. [Online]. Available at: <https://www.gov.uk/government/collections/acmd-annual-reports--2>
- ACMD. (2011). *ACMD Annual Report, 2010-2011*. [Online]. Available at: <https://www.gov.uk/government/publications/acmd-annual-report-2010-to-2011>.
- ACMD. (2016) *Diversion and Illicit Supply of Medicines*. [Online]. Available at: <https://www.gov.uk/government/publications/diversion-illicit-supply-of-medicines>
- ACMD. (n.d.) *About Us*. [Online]. [Accessed 03 January 2016]. Available from: <https://www.gov.uk/government/organisations/advisory-council-on-the-misuse-of-drugs/about>
- Ahmed, S. (2004) *The Cultural Politics of Emotion*. Edinburgh: Edinburgh University Press.
- Alexander, M. (2010) *The New Jim Crow: Mass Incarceration in the Age of Colorblindness*. New York: New Press.
- AMS (Academy of Medical Sciences). (2008) *Brain Science, Addiction and Drugs*. London: Academy of Medical Sciences. Available at: <http://www.acmedsci.ac.uk/policy/policy/brain-science-addiction-and-drugs/>
- AMS. (2012) *Human Enhancement and the Future of Work*. [Online]. [Accessed 28 November 2017] Available from: <https://acmedsci.ac.uk/policy/policy/human-enhancement-and-the-future-of-work>
- AMS. (c2013) *Brain Science, Addiction and Drugs*. [Online]. [Accessed 22 December 2015]. Available from: <http://www.acmedsci.ac.uk/policy/policy/brain-science-addiction-and-drugs/>
- AMS, British Academy, Royal Academy of Engineering & Royal Society. (2012) *Human Enhancement and the Future of Work: Report from a Joint Workshop Hosted by the Academy of Medical Sciences, the British Academy, the Royal Academy of Engineering and the Royal Society*. London: Academy of Medical Sciences.
- Appel, J. (2007) When the Boss Turns Pusher: A Proposal for Employee Protections in the Age of Cosmetic Neurology. *Journal of Medical Ethics*. **34** (8) pp. 616-618.

- Babcock, Q. & Byrne, T. (2000) Student Perceptions of Methylphenidate Abuse at a Public Liberal Arts College. *Journal of American College Health*. **49** (3) pp. 143-145.
- Bacchi, C. (2009) *Analysing Policy: What's the Problem Represented to Be?* Frenchs Forest, NSW: Pearson Australia.
- Bacchi, C. (2017) Drug Problematizations and Politics: Deploying a Poststructural Analytic Strategy. *Contemporary Drug Problems*. pp. 1-12.
- Bacchi, C. & Goodwin, S. (2016). *Poststructural Policy Analysis: A Guide to Practice*. Basingstoke: Palgrave Macmillan.
- Baker, M. (2016) Is There a Reproducibility Crisis? *Nature*. **533** (7604) pp. 452-454.
- Barad, K. (2003) Posthumanist Performativity: Toward an Understanding of How Matter comes to Matter. *Signs: Journal of Women in Culture and Society*. **28** (3) pp. 801-831.
- Barad, K. (2007) *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. London: Duke University Press.
- Barthes, R. (1991 [1957]). *Mythologies*. Selected and translated from the French by Lavers, A. New York: Noonday.
- Baudrillard, J. (2004 [1981]) *Simulacra and Simulation*. Translate from French by Glaser, S. Ann Arbor: The University of Michigan Press.
- Bauman, Z. (2012 [1989]) *Modernity and the Holocaust*. Cambridge: Polity Press.
- Becker, H. (1997 [1963]) *Outsiders: Studies in the Sociology of Deviance*. London: Free Press.
- Bennett, T. & Holloway, K. (2010) Is UK Drug Policy Evidence Based? *International Journal of Drug Policy*. **21** (5) pp. 411-417.
- Benson, K., Flory, K., Humphreys, K. & Lee, S. (2015) Misuse of Stimulant Medication among College Students: A Comprehensive Review and Meta-Analysis. *Clinical Child and Family Psychology Review*. **18** (1) pp. 50-76.
- Berridge, V. (2013) Intoxicants: The Formation of Health Expertise in the Twentieth Century. In: Herring, J., Regan, C., Weinberg, D. & Withington, P. eds. *Intoxication and Society: Problematic Pleasures of Drugs and Alcohol*. Basingstoke: Palgrave Macmillan. pp. 69-83.
- Blackman, S. (2004) *Chilling Out: The Cultural Politics of Substance Consumption, Youth and Drug Policy*. Maidenhead: Open University Press.
- Blakemore, K. (1999 [1998]) *Social Policy: An Introduction*. Buckingham: Open University Press.
- Blank, R. (2010) Globalization: Pluralist Concerns and Contexts. In: Giordano, J. & Gordijn, B. eds. *Scientific and Philosophical Perspectives in Neuroethics*. Cambridge: Cambridge University Press. pp. 321-342.

- BMA (British Medical Association). (2007) *Boosting your Brainpower: Ethical Aspects of Cognitive Enhancement. A Discussion Paper from the BMA*. London: British Medical Association. Available at: [http://enhancingresponsibility.com/wp-content/uploads/2014/01/Boosting\\_brainpower\\_tcm41-147266.pdf](http://enhancingresponsibility.com/wp-content/uploads/2014/01/Boosting_brainpower_tcm41-147266.pdf)
- Borup, M., Brown, N., Konrad, K. & van Lente, H. (2006) The Sociology of Expectations in Science and Technology. *Technology Analysis & Strategic Management*. **18** (3-4) pp. 285-298.
- Bossaer, J., Gray, J., Miller, S., Enck, G., Gaddipati, V. & Enck, R. (2013) The Use and Misuse of Prescription Stimulants as "Cognitive Enhancers" by Students at One Academic Health Sciences Center. *Academic Medicine: Journal of the Association of American Medical Colleges*. **88** (7) pp. 967-71.
- Bostrom, N. & Sandberg, A. (2009) Cognitive Enhancement: Methods, Ethics, Regulatory Challenges. *Science and Engineering Ethics*. **15** (3) pp. 311-341.
- Boydell, J., Dean, K., Dutta, R., Giouroukou, E., Fearon, P. & Murray, R. (2007) A Comparison of Symptoms and Family History in Schizophrenia with and without Prior Cannabis Use: Implications for the Concept of Cannabis Psychosis. *Schizophrenia Research*. **93** (1-3) pp. 203-210.
- Braidotti, R. (2013) *The Posthuman*. Cambridge: Polity Press.
- BSA (British Sociological Association). (2017) *Statement of Ethical Practice*. Durham: BSA Productions.
- Bull, M. (2008) *Governing the Heroin Trade: From Treaties to Treatment*. Aldershot: Ashgate.
- Burkitt, I. (1991) *Social Selves: Theories of the Social Formation of Personality*. London: SAGE Publications.
- Cakic, V. (2009) Smart Drugs for Cognitive Enhancement: Ethical and Pragmatic Considerations in the Era of Cosmetic Neurology. *Journal of Medical Ethics*. **35** (10) pp. 611-615
- Campbell, N. & Herzberg, D. (2017) Gender and Critical Drug Studies: An Introduction and an Invitation. *Contemporary Drug Problems*. **44** (4) pp. 251-264.
- Caplin, N. (1979) The Two-Communitites Theory and Knowledge Utilization. *American Behavioral Scientist*. **22** (3) pp. 459-470.
- Caulfield, A. (2016) Do the Risks of Khat-Induced Dependence and Psychosis Warrant the 2014 UK Ban? *Drug Science, Policy and Law*. **2** (0) pp. 1-8.
- CEST (Quebec Commission on Ethics, Science, and Technology). (2009) *Psychiatric Drugs and Expanded Uses: An Ethical Perspective*. Quebec: Commission de l'éthique de la Science et de la Technologie. Available at: [http://www.ethique.gouv.qc.ca/en/assets/documents/Medicaments-psychoactifs/Medpsycho\\_avisEN.pdf](http://www.ethique.gouv.qc.ca/en/assets/documents/Medicaments-psychoactifs/Medpsycho_avisEN.pdf)
- Chatterjee, A. (2004) Cosmetic Neurology: The Controversy over Enhancing Movement, Mentation, and Mood. *Neurology*. **63** (6) pp. 968-974.

- Chatterjee, A. (2006) The Promise and Predicament of Cosmetic Neurology. *Journal of Medical Ethics*. **32** (2) pp. 110-113.
- Chectona, M. & Greene, K. (2010) College Students' Use of Compliance-Gaining Strategies to Obtain Prescription Stimulant Medications for Illicit Use. *Health Education Journal*. **70** (3) pp. 260-273.
- Christians, C (2000) *Ethics and Politics in Qualitative Research*. In: Denzin, N. & Lincoln, Y. eds. *Handbook of Qualitative Research*. 2<sup>nd</sup> edition. London: SAGE. pp. 133-155.
- Clarke, J. (2004) *Changing Welfare, Changing States: New Directions in Social Policy*. London: SAGE.
- Clarke, J., Bainton, D., Lendvai, N. & Stubbs, P. (2015) *Making Policy Move: Towards a Politics of Translation and Assemblage*. Bristol: The Policy Press.
- Clarke, S., Hoggett, P. & Thompson, S. (2006) The Study of Emotion: An Introduction. In: Clarke, S., Hoggett, P. & Thompson, S. eds. *Emotion, Politics and Society*. Basingstoke: Palgrave Macmillan. pp. 3-13.
- Cohen, S. (1989 [1985]) *Vision of Social Control: Crime, Punishment and Classification*. Cambridge: Polity Press.
- Coomber, R. (2000 [1998]) Preface. In: Coomber, R. ed. *The Control of Drugs and Drug Users: Reason or Reaction?* Amsterdam: Harwood Academic Publishers. pp. xi-xviii.
- CSaP (Centre for Science and Policy). (c2017) *The CUGPOP Seminars 1998-2007*. [Online]. [Accessed 31/03/2017]. Available from: <http://www.csap.cam.ac.uk/about-csap/history/cugpop-seminars-1998-2006/>
- CST (Council for Science and Technology). (2008) *How Academia and Government can Work Together – A Report by the Council for Science and Technology*. London: Crown. Available from: <http://webarchive.nationalarchives.gov.uk/20121212135622/http://www.bis.gov.uk/assets/bispartners/cst/docs/files/whats-new/08-1556-academia-government.pdf>
- Davis, L. (1995) *Enforcing Normalcy: Disability, Deafness, and the Body*. London: Verso.
- Davis, M. (2008) *Freedom and Consumerism: A Critique of Zygmunt Bauman's Sociology*. Aldershot: Ashgate.
- de Jongh, R., Bolt, I., Schermer, M. & Olivier, B. (2008) Botox for the Brain: Enhancement of Cognition, Mood and Pro-Social Behavior and Blunting of Unwanted Memories. *Neuroscience & Biobehavioral Reviews*. **32** (4) pp. 760-776.
- Dean, M. (1997 [1994]) *Critical and Effective Histories: Foucault's Methods and Historical Sociology*. London: Routledge.
- Dees, R. (2007) Better Brains, Better Selves? The Ethics of Neuroenhancements. *Kennedy Institute of Ethics Journal*. **17** (4) pp. 371-395.
- DeGrazia, D. (2005) *Human Identity and Bioethics*. Cambridge: Cambridge University Press.

- Deleuze, G. (2006 [1986]) *Foucault*. Translated from French by Hand, S. London: Continuum.
- DeSantis, A. & Hane, A. (2010) 'Adderall is Definitely Not a Drug': Justifications for the Illegal Use of ADHD Stimulants. *Substance Use and Misuse*. **45** (1-2) pp. 31-46.
- DeSantis, A., Webb, E. & Noar, S. (2008) Illicit Use of Prescription ADHD Medications of College Campus: A Multimethodological Approach. *Journal of American College Health*. **57** (3) pp. 315-323.
- Dickersin, K., Chan, S., Chalmers, T., Sacks, H. & Smith, H. (1987) Publication Bias and Clinical Trials. *Controlled Clinical Trials*. **8** (4) pp. 343-353.
- Dickinson, H. (2011) Implementing Policy: 'We've Given you the Policy Now implement it'. In: Glasby, J. ed. *Evidence, Policy and Practice: Critical Perspectives in Health and Social Care (Why Evidence Doesn't Influence Policy, Why it Should and How it Might)*. Bristol: Policy Press. pp. 71-84.
- Dietz, P., Striegel, H., Franke, A., Lieb, K., Simon, P. & Ulrich, R. (2013) Randomized Response Estimates for the 12-Month Prevalence of Cognitive-Enhancing Drug Use in University Students. *Pharmacotherapy*. **33** (1) pp.44-50.
- Dobson, R. (2015) Power, Agency, Relationality and Welfare Practice. *Journal of Social Policy*. **44** (4) pp. 687-705.
- Dreyfus, H. & Rabinow, P. (1983) *Michel Foucault: Beyond Structuralism and Hermeneutics*. 2nd edition. Chicago: The University of Chicago.
- DrugScience. (c2017) *About*. [Online]. [Accessed 21 November 2017]. Available from: <http://www.drugscience.org.uk/about>
- Dubljević, V. (2012) Toward a Legitimate Public Policy on Cognition Enhancement Drugs. *AJOB Neuroscience*. **3** (3) pp. 29-33.
- Dubljević, V. (2013) Prohibition or Coffee Shops: Regulation of Amphetamine and Methylphenidate for Enhancement Use by Healthy Adults. *The American Journal of Bioethics*. **13** (7) pp. 23-33.
- Easterbrook, P., Berlin, J., Gopalan, R. & Matthews, D. (1991) Publication Bias in Clinical Trials. *The Lancet*. **337** (8746) pp. 867- 872.
- Eickenhorst, P., Vitzthum, K., Klapp, B., Groneberg, D. & Mache, S. (2012) Neuroenhancement among German University Students: Motives, Expectations, and Relationship with Psychoactive Lifestyle Drugs. *Journal of Psychoactive Drugs*. **44** (5) pp. 418-427.
- Elliott, C. (2004 [2003]) *Better than Well: American Medicine Meets the American Dream*. New York: W.W. Norton.
- Elliott, R., Sahakian, J., Matthews, K., Bannerjea, A., Rimmer, J. & Robbins, T. (1997) Effects of Methylphenidate on Spatial Working Memory and Planning in Healthy Young Adults. *Psychopharmacology*. **131** (2) pp. 196-206.



- Estabrooks, C., Thompson, D., Lovely, J. & Hofmeyer, A. (2006) A Guide to Knowledge Translation Theory. *The Journal of Continuing Education in the Health Professions*. **26** (1) pp. 25-36.
- Evans, T. (c2010) *Professional Discretion in Welfare Services: Beyond Street-Level Bureaucracy*. Burlington: Ashgate.
- Farah, M., Illes, J., Cook-Deegan, R., Gardner, H., Kandel, E., King, P., Parens, E., Sahakian, B. & Wolpe, P. (2004) Neurocognitive Enhancement: What Can we do and What Should we do? *Nature Reviews Neuroscience*. **5** (5) pp. 421-425.
- Fine, M., Weis, L., Waseen, S. & Wong, L. (2000) For Whom?: Qualitative Research, Representations and Social Responsibilities. In: Denzin, N. & Lincoln, Y. eds. *Handbook of Qualitative Research*. 2<sup>nd</sup> edition. London: SAGE. pp. 107-131.
- Fischer, F. (2003) *Reframing Public Policy: Discursive Politics and Deliberative Practices*. Oxford: Oxford University Press.
- Fish, S. (1989) *Doing What Comes Naturally: Change, Rhetoric, and the Practice of Theory in Literary and Legal Studies*. Oxford: Oxford University Press.
- Fisher, F. (2003) *Reframing Public Policy: Discursive Politics and Deliberative Practices*. Oxford: Oxford University Press.
- Fitzgerald, D. (2014) The Trouble with Brain Imaging: Hope, Uncertainty and Ambivalence in the Neuroscience of Autism. *BioSocieties*. **9** (3) pp. 241–261
- Flanigan, J. (2013) Adderall for All: A Defense of Pediatric Neuroenhancement. *HEC Forum*. **25** (4) pp. 325-344
- Flyvbjerg, B. (1998 [1991]) *Rationality and Power: Democracy in Practice*. Translated from Danish by Sampson, S. Chicago: The University of Chicago Press.
- Foddy, W. (1993) *Constructing Questions for Interviews and Questionnaires: Theory and Practice in Social research*. Cambridge: Cambridge University Press.
- Foresight. (2003) *Cognitive Systems: Overview*. [No location].: Office of Science and Technology. Available at:  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/300857/03-1336-cognitive-systems-overview.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/300857/03-1336-cognitive-systems-overview.pdf)
- Foresight. (2005a) *Drugs Futures 2025? Executive Summary and Overview*. London: Office of Science and Technology. Available at:  
<https://www.gov.uk/government/publications/drugs-futures-2025>
- Foresight. (2005b) *Drugs Futures 2025?: Modelling Drug Use*. London: Office of Science and Technology. Available from:  
<https://www.gov.uk/government/publications/drugs-futures-2025>
- Foresight. (2005c) *Drugs Futures 2025? The Scenarios*. London: Office of Science and Technology. Available from:  
<https://www.gov.uk/government/publications/drugs-futures-2025>
- Foresight. (2005d) *Drugs Futures 2025?: Horizon Scan*. London: Office of Science and Technology. Available from:  
<https://www.gov.uk/government/publications/drugs-futures-2025>

- Foresight. (2005e) *Drugs Futures 2025?: Public Perspectives*. London: Office of Science and Technology. Available from:  
<https://www.gov.uk/government/publications/drugs-futures-2025>
- Foresight. (2005f) *Drugs Futures 2025?: Perspectives of the Pharmaceutical Industry*. London: Office of Science and Technology. Available from:  
<https://www.gov.uk/government/publications/drugs-futures-2025>
- Foresight. (2007) *Foresight Brain Science, Addiction and Drugs Project: One Year Review. July 2005 – November 2006*. London: Government Office for Science.
- Forlini, C., Hall, W., Maxwell, B., Outram, S., Reiner, P., Repantis, D., Schermer, M. & Racine, E. (2013) Navigating the Enhancement Landscape: Ethical Issues in Research on Cognitive Enhancers for Healthy Individuals. *EMBO Reports*. **14** (2) pp. 123-128.
- Foucault, M. (1980 [1971]) Nietzsche, Genealogy, History. In: Bouchard, D. ed. *Language, Counter-Memory, Practice: Selected Essays and Interviews by Michel Foucault*. Translated from French by Bouchard, D. & Simon, S. New York: Cornell University Press. pp. 139-164.
- Foucault, M. (1991 [1975]) *Discipline and Punish: The Birth of the Prison*. Translated from French by Sheridan, A. London: Penguin.
- Foucault, M. (1996 [1983]) How Much Does it Cost for Reason to Tell the Truth? In: Lotringer, S. ed. *Foucault Live: Collected Interviews, 1961-1984*. Translated from French by Foret, M. & Martius, M. New York: Semiotext(e). pp. 348-362.
- Foucault, M. (1998 [1976]) *The History of Sexuality Volume 1: The Will to Knowledge*. Translated from French by Hurley, R. Harmondsworth: Penguin.
- Foucault, M. (2000 [c1997]) Subjectivity and Truth. In: Rabinow, P. ed. *Essential Works of Foucault 1954-1984. Vol. 1, Ethics: Subjectivity and Truth*. Translated from French by Hurley, R. & others. London: Penguin. pp. 87-92
- Foucault, M. (2002 [1969]) *The Archaeology of Knowledge*. Translated from French by Smith, A. London: Routledge.
- Franke, A., Bonertz, C., Christmann, M., Huss, M., Fellgiebel, A., Hildt, E. & Lieb, K. (2011) Non-Medical Use of Prescription Stimulants and Illicit Use of Stimulants for Cognitive Enhancement in Pupils and Students in Germany. *Pharmacopsychiatry*. **44** (2) pp. 60-66.
- Frankenberg, R. (1993) *White Women, Race Matters: The Social Construction of Whiteness*. London: Routledge.
- Fraser, D. (2003) *The Evolution of the British Welfare State: A History of Social Policy since the Industrial Revolution*. 3<sup>rd</sup> edition. Basingstoke: Palgrave Macmillan.
- Fraser, S. & Moore, D. eds. (2011) *The Drugs Effect: Health, Crime, and Society*. Cambridge: Cambridge University Press.
- Froestl, W., Muhs, A. & Pfeifer, A. (2014) Cognitive Enhancers (Nootropics). Part 1: Drugs interacting with Receptors. Update 2014. *Journal of Alzheimer's Disease*. **41** (4) pp. 961-1019.

- Frosh, S. (2014) The Nature of the Psychosocial: Debates from Studies in the Psychosocial. *Journal of Psycho-Social Studies*. **8** (1) pp. 159-169.
- Fukuyama, F. (2002) *Our Posthuman Future: Consequences of the Biotechnology Revolution*. New York: Farrar Straus & Giroux.
- Gaughan, M. & Bozeman, B. (2016) Using the Prisms of Gender and Rank to Interpret Research Collaboration Power Dynamics. *Social Studies of Science*. **46** (4) pp. 536-558.
- Gewirth, A. (1978) *Reason and Morality*. Chicago: University of Chicago Press.
- Gewirth, A. (1996) *The Community of Rights*. Chicago: University of Chicago Press.
- Giner-Sorolla, R. (2012) Science or Art? How Aesthetic Standards Grease the Way Through the Publication Bottleneck but Undermine Science. *Perspectives on Psychological Science*. **7** (6) pp. 562-571.
- Goodley, D. (2014). *Dis/ability Studies: Theorising Disablism and Ableism*. London: Routledge.
- Government Office for Science. (2005) *Drug Futures 2025*. [Online]. [Accessed 10 November 2015]. Available from: <https://www.gov.uk/government/publications/drugs-futures-2025>
- Greely, H., Sahakian, B., Harris, J., Kessler, R., Grazzaniga, M., Campbell, P. & Farah, M. (2008) Towards Responsible Use of Cognitive-Enhancing Drugs by the Healthy. *Nature*. **456** (7225) pp. 702-705.
- Green, R. & Moore, D. (2009) 'Kiddie Drugs' and Controlled Pleasure: Recreational Use of Dexampetamine in a Social Network of Young Australians. *International Journal of Drug Policy*. **20** (5) pp.402-208.
- Greenwald, A. (1975). Consequences of Prejudice Against the Null Hypothesis. *Psychological Bulletin*. **82** (1) pp. 1-20.
- Guyer, R. & Moreno, J. (2004) Slouching Toward Policy: Lazy Bioethics and the Perils of Science Fiction. *The American Journal of Bioethics*. **4** (4) pp. W14-W17.
- Hall, S. (1986). Gramsci's Relevance for the Study of Race and Ethnicity. *Journal of Communication Inquiry*. **10** (2) pp. 5-27.
- Hall, S. (1992) The West and the Rest: Discourse and Power. In: Hall, S. & Gieben, B. eds. *Formations of Modernity*. pp. 184-227.
- Hall, S. (2003) The Quest for a Smart Pill. *Scientific American*. **289** (3) pp. 54-7; 60-5.
- Hamilton, P. (1995 [1992]) [Extracts from] The Enlightenment and the Birth of Social Science. In: Anthias, F. & Kelly, M. eds. *Sociological Debates: Thinking about "the Social"*. Dartford: Greenwich University Press. pp. 35-46.
- Hansard. (2010) HC Deb. cols 904W, 9 Feb.
- Hansen, H. (2017) Assisted Technologies of Social Reproduction: Pharmaceutical Prosthesis for Gender, Race, and Class in the White Opioid "Crisis". *Contemporary Drug Problems*. **44** (4) pp. 321-338.

- Haraway, D. (1991) *Simians, Cyborgs, and Women: The Reinvention of Nature*. London: Free Association Books.
- Haraway, D. (1997) *Modest\_Witness@Second\_Millennium.FemaleMan\_Meets\_OncoMouse™: Feminism and Technoscience*. London: Routledge.
- Harris, J. (2010 [2007]) *Enhancing Evolution: The Ethical Case for Making Better People*. Princeton: Princeton University Press.
- Harvey, W. (2011) Strategies for Conducting Elite Interviews. *Qualitative Research*. **11** (4) pp. 431-441.
- Hauskeller, M. (2013) Cognitive Enhancement – To What End? In: Hildt, E. & Franke, A. eds. *Cognitive Enhancement: An Interdisciplinary Perspective*. Dordrecht: Springer. pp. 113-123.
- HED (Human Enhancement Network). (n.d.) *Human Enhancement Network*. [Online]. [Accessed 01 December 2017]. Available from: <https://humanenhancementdrugs.com/>
- Heinz, A., Kipke, R., Heimann, H. & Wiesing, U. (2012) Cognitive Neuroenhancement: False Assumptions in the Ethical Debate. *Journal of Medical Ethics*. **38** (6) pp. 372-375.
- Helmer, J. (1975) *Drugs and Minority Oppression*. New York: The Seabury Press.
- Hesse, B. (1997) White Governmentality: Urbanism, Nationalism, Racism. In: Westwood, S. & Williams, J. eds. *Imagining Cities: Scripts, Signs, Memories*. London: Routledge. pp. 86-103.
- Hesse, B. (2011) Self-Fulfilling Prophecy: The Postracial Horizon. *The South Atlantic Quarterly*. **110** (1) pp. 155-178.
- Hildt, E. & Franke, A. eds. (2013) *Cognitive Enhancement: An Interdisciplinary Perspective*. Dordrecht: Springer.
- Hildt, E., Lieb, K. & Franke, A. (2014) Life Context of Pharmacological Academic Performance Enhancement among University Students – A Qualitative Approach. *BMC Medical Ethics*. **15** (23) pp. 1-10.
- Hindmoor, A. (2016) *Elite Interview Training*. ESRC WR DTC Training, 17 March, University of Sheffield, England.
- Hogget, P. (2001) Agency, Rationality and Social Policy. *Journal of Social Policy*. **30** (1) pp. 37-56.
- Hogget, P. (2008) Relational Thinking and Welfare Practice. In Clarke, S., Hoggett, P. & Hahn, H. eds. *Object Relations and Social Relations*. London: Karnac. pp. 65–85.
- Hollway, W. & Jefferson, T. (2004) Free Association Interviewing. In: Lewis-Beck, M., Bryman, A. & Liao, T. eds. *The SAGE Encyclopedia of Social Science Research Methods*. London: SAGE Publications. pp. 404-405.

- Hollway, W. & Jefferson, T. (2013) *Doing Qualitative Research Differently: Free Association, Narrative and Interview Method*. 2<sup>nd</sup> edition. London: SAGE Publications.
- Housden, C., Morein-Zamir, S. & Sahakian, B. (2011) Cognitive Enhancing Drugs: Neuroscience and Society. In: Savulescu, J., ter Meulen, R. & Kahane, G. eds. *Enhancing Human Capacities*. Oxford: Blackwell. pp. 113-126.
- House of Commons. (2015) *Notices of Amendments, Given up to and Including, Tuesday 15 December 2015 (Psychoactive Substances Bill)*. [Online]. [Accessed 5 January 2016]. Available from: [http://www.publications.parliament.uk/pa/bills/cbill/2015-2016/0088/amend/psycho\\_rm\\_rep\\_1215.pdf](http://www.publications.parliament.uk/pa/bills/cbill/2015-2016/0088/amend/psycho_rm_rep_1215.pdf)
- Hughes, J. (2004) *Citizen Cyborg: Why Democratic Societies Must Respond to the Redesigned Human of the Future*. Cambridge: Westview.
- Hunter, S. (2003) A Critical Analysis of Approaches to the Concept of Social Identity in Social Policy. *Critical Social Policy*. **23** (3) pp. 322-344.
- Hunter, S. (2008) Living Documents: A Feminist Psychosocial Approach to the Relational Politics of Policy Documentation. *Critical Social Policy*. **28** (4) pp. 506-528.
- Hunter, S. (2009) Subversive Attachments: Gendered, Raced and Professional Realignments in the 'New' NHS. In: Barnes, M. & Prior, D. eds. *Subversive Citizens: Power, Agency, and Resistance in Public Services*. Bristol: Policy Press. pp. 137-153.
- Hunter, S. (2012) Ordering Differentiation: Reconfiguring Governance as Relational Politics. *Journal of Psycho-Social Studies*. **6** (1) pp. 3-29.
- Hunter, S. (2015) *Power, Politics and the Emotions: Impossible Governance?* London: Routledge.
- Hupli, A., Didžiokaitė, G. & Ydema, M. (2016) Toward the Smarter Use of Smart Drugs: Perceptions and Experiences of University Students in the Netherlands and Lithuania. *Contemporary Drug Problems*. **43** (3) pp. 1-16.
- Hyman, S., Volkow, N. & Nutt, D. (2013) Pharmacological Cognitive Enhancement in Healthy People: Potential and Concerns. *Neuropharmacology*. **64** pp. 8-12.
- Juth, N. (2011) Enhancement, Autonomy, and Authenticity. In: Savulescu, J., ter Meulen, R. & Kahane, G. eds. *Enhancing Human Capacities*. Oxford: Wiley-Blackwell. pp. 34-48.
- Keane, H. (2008) Pleasure and Discipline in the Uses of Ritalin. *International Journal of Drug Policy*. **19** (5) pp. 401-409.
- Keane, H. (2011). Drugs that Work: Pharmaceuticals and Performance Self-Management. In: Fraser, S. & Moore, D. *The Drug Effect: Health, Crime and Society*. Cambridge: Cambridge University Press. pp. 106-121.
- Ker, A. & Garforth, L. (2016) Affective Practices, Care and Bioscience: A Study of Two Laboratories. *The Sociological Review*. **64** (1) pp. 3-20.

- Kerr, A. & Shakespeare, T. (2002) *Genetic Politics: From Eugenics to Genome*. Cheltenham: New Clarion Press.
- Kohn, M. (1992) *Dope Girls: The Birth of the British Drug Underground*. London: Granta Publications.
- Kuhn, T. (1996 [1962]) *The Structure of Scientific Revolutions*. 3<sup>rd</sup> edition. Chicago: The University of Chicago Press.
- Kvale, S. (1996) *InterViews: An Introduction to Qualitative Research Interviewing*. London: SAGE Publications.
- Laclau, E. (1977) *Politics and Ideology in Marxist Theory: Capitalism, Fascism, Populism*. London: New Left Books.
- Laclau, E. (1994) Introduction. In: Laclau, E. ed. *The Making of Political Identities*. London: Verso. pp. 1–8.
- Laclau, E. (2006) Why Constructing a People Is the Main Task of Radical Politics. *Critical Inquiry*. **32** (4) pp. 646-680.
- Laclau, E. & Mouffe, C. (2014 [2001]) *Hegemony and Socialist Strategy: Towards a Radical Democratic Politics*. 2<sup>nd</sup> edition. London: Verso.
- Lancaster, K. (2014) Social Construction and the Evidence-Based Drug Policy Endeavour. *International Journal of Drug Policy*. **25** (5) pp. 948-951.
- Lancaster, K. (2016) Performing the Evidence-Based Drug Policy Paradigm. *Contemporary Drug Problems*. **43** (2) pp. 142-153.
- Lancaster, K. (2017) Confidentiality, Anonymity and Power Relations in Elite Interviewing: Conducting Qualitative Policy Research in a Politicised Domain. *International Journal of Social Research Methodology*. **20** (1) pp. 93–103.
- Lancaster, K., Duke, K. & Ritter, A. (2015) Producing the ‘Problem of Drugs’: A Cross National-Comparison of ‘Recovery’ Discourse in Two Australian and British Reports. *International Journal of Drug Policy*. **26** (7) pp. 617-625.
- Lancaster, K., Seear, K. & Treloar, C. (2015) Laws Prohibiting Peer Distribution of Injecting Equipment in Australia: A Critical Analysis of their Effects. *International Journal of Drug Policy*. **26** (12) pp. 1198-1206.
- Larriviere, D., Williams, M., Rizzo, M. & Bonnie, R. (2009) Responding to Requests from Adult Patients for Neuroenhancements: Guidance of the Ethics, Law and Humanities Committee. *Neurology*. **73** (17) pp. 1406-1412.
- Latour, B. (2002 [1987]) *Science in Action: How to Follow Scientists and Engineers through Society*. Cambridge: Harvard University Press.
- Latour, B. (2007 [2005]) *Reassembling the Social: An Introduction to Actor-Network-Theory*. Oxford: Oxford University Press.
- Latour, B. & Woolgar, S. (1979) *Laboratory Life: The Construction of Scientific Facts*. London: Sage.
- Law, J. (2008 [2004]) *After Method: Mess in Social Science Research*. First Indian Reprint. London: Routledge.

- Law, J. & Singleton, V. (2014) ANT, Multiplicity and Policy. *Critical Policy Studies*. **8** (4) pp. 379-396.
- Leeuw, F. (1991) Policy Theories, Knowledge Utilization, and Evaluation. *Knowledge and Policy*. **4** (3) pp 73-91.
- Lennard, N. (2009) One in Ten Takes Drugs to Study. *Varsity*. [Online]. 6 March. [Accessed 1 June 2015]. Available from: <http://www.varsity.co.uk/news/1307>
- Levy, N. (2013) There May Be Costs to Failing to Enhance, as Well as to Enhancing. *The American Journal of Bioethics*. **13** (7) pp. 38-39.
- Limitless*. (2011) [Film]. Neil Burger. Dir. United States: Virgin Produced.
- Low, K. & Gendaszek, A. (2002) Illicit Use of Psychostimulants among College Students: A Preliminary Study. *Psychology, Health & Medicine*. **7** (3) pp. 283-287.
- Lucke, J., Bell, S., Partridge, B. & Hall, W. (2011a) Academic Doping or Viagra for the Brain?: The History of Recreational Drug Use and Pharmacological Enhancement can Provide Insight into These Uses of Neuropharmaceuticals. *EMBO Reports*. **12** (3) pp. 197-201.
- Lucke, J., Bell, S., Partridge, B. & Hall, W. (2011b) Deflating the Neuroenhancement Bubble. *AJOB Neuroscience*. **2** (4) pp. 38-43.
- Lucy*. (2014). [Film]. Luc Besson. Dir. France: EuropaCorp.
- Lusane, C. (1991) *Pipe Dream Blues: Racism and the War on Drugs*. Boston: South End Press.
- Lynch, G., Palmer, L. & Gall, C. (2011) The Likelihood of Cognitive Enhancement. *Pharmacology, Biochemistry and Behavior*. **99** (2) pp. 116-129.
- MacGregor, S. (2012) Barriers to the Influence of Evidence on Policy: Are Politicians the Problem? *Drugs: Education, Prevention and Policy*. **20** (3) pp. 225-233.
- MacGregor, S., Singleton, N. & Trautmann, F. (2014) Towards Good Governance in Drug Policy: Evidence, Stakeholders and Politics. *International Journal of Drug Policy*. **25** (5) pp. 931-934
- Mache S., Eickenhorst M., Vitzthum K., Klapp B. F., Groneberg D. A. (2012) Cognitive-Enhancing Substance Use at German Universities: Frequency, Reasons and Gender Differences. *Wiener Medizinische Wochenschrift*. **162** (11-12) pp. 262-271
- Malins, P. (2017) Desiring Assemblages: A Case for Desire over Pleasure in Critical Drug Studies. *International Journal of Drug Policy*. **49** pp. 126-132
- Mamo, L. & Fishman, J. (2001) Potency in All the Right Places: Viagra as a Technology of the Gendered Body. *Body & Society*. **7** (4) pp. 13-35.
- Manderson, D. (1999) Symbolism and Racism in Drug History and Policy. *Drug and Alcohol Review*. **18** (2) pp. 179-186.
- Mansfield, N. (2003) *Subjectivity: Theories of the Self from Freud to Haraway*. New York: New York University Press.

- Martin, E. (2004) Talking Back to Neuro-Reductionism. In: Thomas, H. & Ahmed, J. eds. *Cultural Bodies: Ethnography and Theory*. Oxford: Blackwell. pp. 190-211.
- Mason, J. (2002) *Qualitative Researching*. London: Sage.
- Mauer, M. (1999) *Race to Incarcerate*. New York: New Press.
- McAllister, W. (2000) *Drug Diplomacy in the Twentieth Century: An International History*. London: Routledge.
- McCabe, S., Knight, J., Teter, C. & Wechsler, H. (2005) Non-Medical Use of Prescription Stimulants among US College Students: Prevalence and Correlates from a National Survey. *Addiction*. **100** (1) pp. 96-106.
- Mertens, D. (2014) Ethical use of Qualitative Data and Findings. In Flick, U. ed. *The SAGE Handbook of Qualitative Data Analysis*. London: SAGE. pp. 510-523.
- Miller, P. & Wilsdon, J. (2006b) Stronger, Longer, Smarter, Faster. In: Miller, P. & Wilsdon, J. eds. *Better Humans?: The Politics of Human Enhancement and Life Extension*. London: Demos. pp. 13-27.
- Miller, P. & Wilsdon, J. eds. (2006a) *Better Humans?: The Politics of Human Enhancement and Life Extension*. London: Demos.
- Miller, T. (2012) Reconfiguring Research Relationships: Regulation, New Technologies and Doing Ethical Research. In: Miller, T., Birch, M., Mauthner, M. & Jessop, J. eds. *Ethics in Qualitative Research*. 2<sup>nd</sup> edition. London: SAGE. pp. 29-42.
- Misuse of Drugs Act 1971*. (c.38). London: The Stationery Office Limited. Available at: [https://www.legislation.gov.uk/ukpga/1971/38/pdfs/ukpga\\_19710038\\_en.pdf](https://www.legislation.gov.uk/ukpga/1971/38/pdfs/ukpga_19710038_en.pdf)
- Mitrović, V. (2014) The Contingency of the “Enhancement” Arguments: The Possible Transition from Ethical Debate to Social and Political Programs. *Journal for the Study of Religions and Ideologies*. **13** (37) pp. 93-124.
- Mol, A. (2005 [1999]) Ontological Politics: A Word and Some Questions. In: Law, J. & Hassard, J. eds. *Actor Network Theory and After*. Oxford: Blackwell. pp. 74-89
- Mol, A. & Law, I. (2006 [2002]) Complexities: An Introduction. In: Law, I. & Mol, A. eds. *Complexities: Social Studies of Knowledge Practices*. Durham: Duke University Press. pp. 1-22.
- Monaghan, M. (2011) *Evidence versus Politics: Exploiting Research in UK Drug Policy Making?* Bristol: Policy Press.
- Moore, K. & Measham, F. (2012) The Silent “G”: A Case Study in the Production of “Drugs” and “Drug Problems”. *Contemporary Drug Problems*. **39** (3) pp. 565-590.
- Morrison, P. & Murray, R. (2007) Reefer Madness: Cannabinoid Psychoses. *The Biochemist*. **29** (2) pp. 8-10.
- Murch, D. (2015) Crack in Los Angeles: Crisis, Militarization, and Black Response to the Late Twentieth-Century War on Drugs. *Journal of American History*. **102** (1) pp. 162-173.



- Murji, K. (2000 [1999]) White Lines: Culture, 'Race' and Drugs. In: South, N. ed. *Drugs: Cultures, Controls and Everyday Life*. London: SAGE. pp. 49-65.
- Musto, D. (1991) *Opium, Cocaine and Marijuana in American History*. Scientific American. 265 (1) pp. 40-47.
- Musto, D. (1999) *The American Disease: Origins of Narcotic Control*. 3rd edition. Oxford: Oxford University Press.
- Naam, R. (2005) *More than Human: Embracing the Promise of Biological Enhancement*. New York: Broadway Books.
- New Drugs Seminar (2016) *Roundtable 1 – ESRC New Drugs Seminar 6-9-2016*. [Podcast]. [Accessed 12 October 2016]. Available from: [http://backdoorbroadcasting.net/archive/audio/2016\\_09\\_06/2016\\_09\\_06\\_New\\_Drugs\\_Seminars7\\_Roundtable1.mp3](http://backdoorbroadcasting.net/archive/audio/2016_09_06/2016_09_06_New_Drugs_Seminars7_Roundtable1.mp3)
- Neal, S., & McLaughlin, E. (2009) Researching Up? Interviews, Emotionality and Policy Making Elites. *Journal of Social Policy*. 38 (4) pp. 689-707.
- Nielson, L. (2011) The Concept of Nature and the Enhancement Technologies Debate. In: Savulescu, J., ter Meulen, R. & Kahane, G. eds. *Enhancing Human Capacities*. Oxford: Wiley-Blackwell. pp. 19-33.
- Nutt, D. (2005) Foresight Brain Science, Addiction and Drugs Project. *Journal of Psychoarmacology*. 19 (4) p. 325.
- Nutt, D. (2009a) *Letter to Rt Hon Jacqui Smith*. 31<sup>st</sup> March. Available at: [https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/119164/ACMD-letter-to-Home-Secretary.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/119164/ACMD-letter-to-Home-Secretary.pdf)
- Nutt, D. (2009b) Equasy – An Overlooked Addiction with Implications for the Current Debate on Drug Harms. *Journal of Psychopharmacology*. 23 (1) pp. 3-5.
- Nutt, D. (c2012) *Drugs – Without the Hot Air: Minimizing the Harms of Legal and Illegal Drugs*. Cambridge: UIT Cambridge.
- Nutt, D., King, L., Saulsbury, W. & Blakemore, C. (2007a) Development of a Rational Scale to Assess the Harm of Drugs of Potential Misuse. *Lancet*. 369 (9566) pp. 1047-53.
- Nutt, D., Robbins, T., Stimson, G., Ince, M. & Jackson, A. eds. (2007b) *Drugs and the Future: Brain Science, Addiction and Society*. London: Elsevier.
- Odendahl, T. & Shaw, A. (2001) Interviewing Elites. In: L. Gubrium, J. & Holslein, J. eds. *Handbook of Interview Research: Context & Methods*. London: SAGE. pp. 299-316.
- Oliver, K. & de Vocht, F. (2015) Defining 'Evidence' in Public Health: A Survey of Policymakers' Uses and Preferences. *European Journal of Public Health*. 27 (suppl\_2) pp. 112-117.
- Outram, S. & Racine, E. (2011) Examining Reports and Policies on Cognitive Enhancement: Approaches, Rationale, and Recommendations. *Accountability in Research*. 18 (5) pp. 323-341.

- Packwood, A. (2002) Evidence-Based Policy: Rhetoric and Reality. *Social Policy and Society*. **1** (3) pp. 267-272.
- Partridge, B., Bell, S., Lucke, J. & Hall, W. (2013) Australian University Students' Attitudes towards the Use of Prescription Stimulants as Cognitive Enhancers: Perceived Patterns of Use, Efficacy, and Safety. *Drug and Alcohol Review*. **32** (3) pp. 295-302.
- Pashler, H. & Wagenmakers, E. (2012) Editors' Introduction to the Special Section on Replicability in Psychological Science: A Crisis of Confidence? *Perspectives on Psychological Science*. **7** (6) pp. 528-530.
- Pawson, R. (2005) *Evidence-Based Policy: A Realist Perspective*. London: SAGE.
- Peterkin, A., Crone, C., Sheridan, M. & Wise, T (2011) Cognitive Performance Enhancement: Misuse or Self-Treatment? *Journal of Attention Disorders*. **15** (4) pp. 263-268.
- Petersen, M., Nørgaard, L. & Traulsen, J. (2015a) Pursuing Pleasures of Productivity: University Students' Use of Prescription Stimulants for Enhancement and the Moral Uncertainty of Making Work Fun. *Culture, Medicine and Psychiatry*. **39** (4) pp. 665-79.
- Petersen, M., Nørgaard, L. & Traulsen, J. (2015b) Going to the Doctor with Enhancement in Mind – An Ethnographic Study of University Students' Use of Prescription Stimulants and their Moral Ambivalence. *Drugs: Education, Prevention and Policy*. **22** (3) pp. 201-207.
- Potter, J. & Hepburn, A. (2005) Qualitative Interviews in Psychology: Problems and Possibilities. *Qualitative Research in Psychology*. **2** (4) pp. 281-307.
- Powell, R. & Buchanan, A. (2011) Breaking Evolution's Chains: The Promise of Enhancement by Design. In: Savulescu, J., ter Meulen, R. & Kahane, G. eds. *Enhancing Human Capacities*. Oxford: Wiley-Blackwell. pp. 49-67.
- President's Council on Bioethics. (2003) *Beyond Therapy: Biotechnology and the Pursuit of Happiness*. New York: Ragen Books. Available at: <https://repository.library.georgetown.edu/handle/10822/559341>
- Provine, D. (2007) *Unequal under Law: Race in the War on Drugs*. London: The University of Chicago Press.
- Psychoactive Substances Bill 2015-2016*. (HL Bill 88, 2015-16) London: The Stationery Office. Available from: <http://www.publications.parliament.uk/pa/bills/cbill/2015-2016/0088/15088.pdf>
- Pykett, J. (2012) The New Maternal State: The Gendered Politics of Governing through Behaviour Change. *Antipode*. **44** (1) pp. 217-238.
- Pykett, J. (2013) Neurocapitalism and the New Neuros: Using Neuroeconomics, Behavioural Economics and Picoeconomics for Public Policy. *Journal of Economic Geography*. **13** (5) pp. 845-869.
- Quednow, B. (2010) Ethics of Neuroenhancement: A Phantom Debate. *BioSocieties*. **5** (1) pp. 149-156.

- Race, K. (2009) *Pleasure Consuming Medicine: The Queer Politics of Drugs*. Durham & London: Duke University Press.
- Racine, E. (2010) *Pragmatic Neuroethics: Improving Treatment and Understanding of the Mind-Brain*. Cambridge: The MIT Press.
- Racine, E. & Forlini, C. (2009) Expectations Regarding Cognitive Enhancement Create Substantial Challenges. *Journal of Medical Ethics*. **35** (8) pp. 469-470.
- Racine, E. & Illes, J. (2006) Neuroethical Responsibilities. *Canadian Journal of Neurological Sciences*. **33** (3) pp. 269-77, 260-8.
- Ragan, C. (2009) Memorandum submitted by Dr C Ian Ragan (PR 03). In: Science and Technology Committee. *The Government's Review of the Principles Applying to the Treatment of Independent Scientific Advice Provided to Government. Third Report of Session 2009–10, Volume II: Written Evidence*. London: The Stationery Office Limited. Available at:  
<http://www.publications.parliament.uk/pa/cm200910/cmselect/cmsctech/158/158ii.pdf>
- Ragan, C., Bard, I. & Singh, I. (2013) What Should we do About Student Use of Cognitive Enhancement? An Analysis of Current Evidence. *Neuropharmacology*. **64** pp. 588-595.
- Ramazanoğlu, C. & Holland, J. (2004 [2002]) *Feminist Methodology: Challenges and Choices*. London: SAGE Publications.
- Randall, D., Fleck, N., Shneerson, J. & File, S. (2004) The Cognitive-Enhancing Properties of Modafinil are Limited in Non-Sleep-Deprived Middle-Aged Volunteers. *Pharmacology Biochemistry and Behavior*. **77** (3) pp.547-555.
- Randall, D., Shneerson, J. & File, S. (2005b) Cognitive Effects of Modafinil in Student Volunteers may depend on IQ. *Pharmacology Biochemistry and Behavior*. **82** (1) pp. 133-139.
- Randall, D., Shneerson, J., Plaha, K. & File, S. (2003) Modafinil affects Mood, but Not Cognitive Function, In Healthy Young Volunteers. *Human Psychopharmacology*. **18** (3) pp. 163-173.
- Randall, D., Viswanath, A., Bharania, P., Elsabagh, S., Hartley, D., Shneerson, J. & File, S. (2005a) Does Modafinil Enhance Cognitive Performance in Young Volunteers Who are Not Sleep-Deprived? *Journal of Clinical Psychopharmacology*. **25** (2) pp. 175-179.
- Rehmann-Sutter, C., Eilers, M. & Grüber, K. (2014) Refocusing the Enhancement Debate. In: Eilers, M., Grüber, K. & Rehmann-Sutter, C. eds. *The Human Enhancement Debate and Disability: New Bodies for a Better Life*. Basingstoke: Palgrave Macmillan. pp. 1-20.
- Rhodes, R. (2006) Policy Network Analysis. In: Goodin, R., Moran, M., & Rein, M. eds. *The Oxford Handbook of Public Policy*. pp. 425-443.
- Ritter, A. (2009) How do Drug Policy Makers Access Research Evidence? *International Journal of Drug Policy*. **20** (1) pp. 70-75.

- Roberts, M. (2014) Making Drug Policy Together: Reflections on Evidence, Engagement and Participation. *International Journal of Drug Policy*. **25** (5) pp. 952-956.
- Robitaille, C. & Collin, J. (2016) Prescription Psychostimulant Use Among Young Adults: A Narrative Review of Qualitative Studies. *Substance Use & Misuse*. **51** (3) pp. 357-369.
- Rogers, R., Blackshaw, A., Middleton, H., Matthews, K., Hawtin, K., Crowley, C., Hopwood, A., Wallace, C., Deakin, J., Sahakian, B. & Robbins, T. (1999) Tryptophan Depletion Impairs Stimulus-Reward Learning while Methylphenidate Disrupts Attentional Control in Healthy Young Adults: Implications for the Monoaminergic Basis of Impulsive Behaviour. *Psychopharmacology*. **146** (4) pp. 482-491.
- Rorty, R. (1982 [1981]). Method, Social Science, and Social Hope. In: Rorty, R. ed. *Consequences of Pragmatism (Essays: 1972- 1980)*. Brighton: The Harvester Press. pp. 191-210.
- Rorty, R. (1993 [1989]) *Contingency, Irony, and Solidarity*. New York: University of Cambridge Press.
- Rose, N. & Abi-Rached, J. (2013) *Neuro: The New Brain Sciences and the Management of the Mind*. Princeton: Princeton University Press.
- Rose, S. (2008) The Art of Medicine: How Smart are Smart Drugs? *The Lancet*. **372** (9634) pp. 198-199.
- Rossiter, M. (1993) The ~~Matthew~~ Matilda Effect in Science. *Social Studies of Science*. **23** (2) pp. 325-341.
- Royal Society. (2011) Brain Waves Module 1: Neuroscience, Society and Policy. London: The Royal Society. Available from: [https://royalsociety.org/~media/Royal\\_Society\\_Content/policy/publications/2011/4294974932.pdf](https://royalsociety.org/~media/Royal_Society_Content/policy/publications/2011/4294974932.pdf)
- Royal Society. (c2017) *Brain Waves*. [Online]. [Accessed 28 November 2017]. Available from: <https://royalsociety.org/topics-policy/projects/brain-waves/>
- Ryan, G. & Bernard, R. (2000) *Data Management and Analysis Methods*. In: Denzin, N. & Lincoln, Y. eds. *Handbook of Qualitative Research*. 2<sup>nd</sup> edition. London: SAGE Publications. pp. 769-802.
- SAGE (2014) *Critical Social Policy: A Journal of Theory and Practice in Social Welfare*. [Online]. [Accessed 05 December 2014]. Available from: <http://journals.sagepub.com/home/cspa>
- Sahakian, B. & Morein-Zamir, S. (2007) Professor's Little Helper. *Nature*. **450** (7173) pp. 1157-1159.
- Said, E. (1980 [1976]) *Orientalism*. London: Routledge.
- SAMI Consulting. (n.d.) The SAMI Seven Questions. [Online]. [Accessed 30/10/2017]. Available from: <http://www.samiconsulting.co.uk/training/sevenquestions.html>

- Sandberg, A. (2011) Cognition Enhancement: Upgrading the Brain. In: Savulescu, J., ter Meulen, R. & Kahane, G. eds. *Enhancing Human Capacities*. Oxford: Blackwell. pp. 71-91.
- Sandberg, A. & Bostrom, N. (2006) Converging Cognitive Enhancements. *Annals of the New York Academy of Science*. **1093** pp. 201-227.
- Sandberg, A. & Savulescu, J. (2011) The Social and Economic Impact of Cognitive Enhancement. In: Savulescu, J., ter Meulen, R. & Kahane, G. eds. *Enhancing Human Capacities*. Oxford: Wiley-Blackwell. pp. 92-112.
- Sandberg, A., Savulescu, J. & Sinnott-Armstrong, W. (2011) Cognitive Enhancement in Courts. In: Illes, J. & Sahakian, B. eds. *The Oxford Handbook of Neuroethics*. Oxford, UK: Oxford University Press. pp. 273-284.
- Sandel, M. (2004) The Case Against Perfection. *The Atlantic Monthly*. **293** (3) pp. 51-62.
- Sandel, M. (2007) *The Case Against Perfection: Ethic in an Age of Genetic Engineering*. London: The Belknap Press of Harvard University Press.
- Sanderson, I. (2002) Evaluation, Policy Learning and Evidence-Based Policy Making. *Public Administration*. **80** (1) pp. 1-22.
- Sarter, M. (2006) Preclinical Research into Cognition Enhancers. *Trends in Pharmacological Sciences*. **27** (11) pp. 602-608.
- Saussure, F. (1959 [1916]) *Course in General Linguistics*. Edited by Bally, C. & Sechehaye, A., in collaboration with Reidlinger, A. Translated from the French by Baskin, W. New York: Philosophical Library.
- Savulescu, J. (2005) New Breeds of Humans: The Moral Obligation to Enhance. *Reproductive BioMedicine Online*. **10** (1) pp. 36-39.
- Savulescu, J. (2011) Human Liberation: Removing Biological and Psychological Barriers to Freedom. *Monash Bioethics Review*. **29** (1) pp. 04.1-04.18.
- Savulescu, J. & Kahane, G. (2009) The Moral Obligation to Create Children with the Best Chance of the Best Life. *Bioethics*. **23** (5) pp. 274-90.
- Savulescu, J., Sandberg, A. & Kahane, G. (2011) Well-Being and Enhancement. In: Savulescu, J., ter Meulen, R. & Kahane, G. eds. *Enhancing Human Capacities*. Oxford: Wiley-Blackwell. pp. 3-18.
- Savulescu, J., ter Meulen, R. & Kahane, G. eds. (2011) *Enhancing Human Capacities*. Oxford: Wiley-Blackwell.
- Sayyid, S. (2003) *A Fundamental Fear: Eurocentrism and the Emergence of Islamism*. 2<sup>nd</sup> edition. London: Zed Book Ltd.
- Schermer, M. (2008) On the Argument that Enhancement is “Cheating”. *Journal of Medical Ethics*. **34** (2) pp. 85-88
- Schleim, S. (2010) Second Thoughts of the Prevalence of Enhancement. *BioSocieties*. **5** (4) pp. 484-485

- Schluskel, D. (2017) "The Mellow Pot-Smoker": White Individualism in Marijuana Legalization. *California Law Review*. **105** (3) pp. 885-927
- Seale, C. (1999) Quality in Qualitative Research. *Qualitative Inquiry*. **5** (4) pp. 465-478
- Seddon, T. (2010) *A History of Drugs and Freedom in the Liberal Age*. Hoboken: Taylor and Francis.
- Seddon, T. (2014) Drug Policy and Global Regulatory Capitalism: The Case of New Psychoactive Substances (NPS). *International Journal of Drug Policy*. **25** (5) pp. 1019-1024
- Seddon, T., Ralphs, R. & Williams, L. (2008) Risk, Security and the "Criminalization" of British Drug Policy. *British Journal of Criminology*. **48** (6) pp. 818-834
- Seddon, T., Williams, L., Ralphs, R. (2012) *Tough Choices: Risk, Security and the Criminalization of Drug Policy*. Oxford: Oxford University Press.
- Shapiro, H. (1999) *Waiting for the Man: The Story of Drugs and Popular Music*. Fully revised and updated edition. London: Helter Skelter.
- Shiner, M. (2013) British Drug Policy and the Modern State: Reconsidering the Criminalisation Thesis. *Journal of Social Policy*. **42** (3) pp. 623-643.
- Simmon, J., Nelson, L. & Simonsohn, U. (2011) False-Positive Psychology: Undisclosed Flexibility in Data Collection and Analysis Allows Presenting Anything as Significant. *Psychological Science*. **22** (11) pp. 1359-1366.
- Simon, H. (1967 [1957]) *Models of Man, Social and Rational: Mathematical Essays on Ration Human Behavior in a Social Setting*. New York: Wiley.
- Singh, I. (2002). Bad Boys, Good Mothers and The 'Miracle' of Ritalin. *Science in Context*. **15** (4) pp. 577-603.
- Singh, I., Bard, I. & Jackson, J. (2014) Robust Resilience and Substantial Interest: A Survey of Pharmacological Cognitive Enhancement among University Students in the UK and Ireland. *PLoS ONE*. **9** (10) e105969.
- Skinner, Q. (1969) Meaning and Understanding in the History of Ideas. *History and Theory*. **8** (1) pp. 3-53.
- Smith, E. & Farah, M. (2011) Are Prescription Stimulants "Smart Pills"?: The Epidemiology and Cognitive Neuroscience of Prescription Stimulant Use by Normal Healthy Individuals. *Psychological Bulletin*. **137** (5) pp. 717-741
- Smith, J. (2009) *Letter to the Advisory Council on the Misuse of Drugs*. 13<sup>th</sup> March. Available at:  
[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/119101/home-sec-letter-to-ACMD.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/119101/home-sec-letter-to-ACMD.pdf)
- Sparrow, R. (2011) A Not-so-New Eugenics. Harris and Savulescu on Human Enhancement. *The Hastings Center Report*. **41** (1) pp. 32-42.
- Stenner, P. (2014) Psychosocial: Qu'est-Ce Que C'est? *Journal of Psycho-Social Studies*. **8** (1) pp. 205-216.

- Stevens, A. (2007) Survival of the Ideas that Fit: An Evolutionary Analogy for the Use of Evidence in Policy. *Critical Social Policy*. **6** (1) pp. 25-35.
- Stevens, A. (2011a) *Drugs, Crime and Public Health: The Political Economy of Drug Policy*. Abingdon: Routledge.
- Stevens, A. (2011b) Drug Policy, Harm and Human Rights: A Rationalist Approach. *International Journal of Drug Policy*. **22** (3) pp. 233-238.
- Stimson, G. & Rhodes, T. (2001) Promoting Rational Drug Policy. *International Journal of Drug Policy*. **12** (1) pp. 1-2.
- Tammi, T. & Hurme, T. (2007) How the Harm Reduction Movement Contrasts itself Against Punitive Prohibition. *International Journal of Drug Policy*. **18** (2) pp. 84-87.
- Taylor, D. (1998) Social Identity and Social Policy: Engagements with Postmodern Theory. *Journal of Social Policy*. **27** (3) pp. 329-350
- Taylor, D. ed. (1996) *Critical Social Policy: A Reader*. London: SAGE.
- Taylor, S., Buchanan, J. & Ayres, T (2016) Prohibition, Privilege and the Drug Apartheid: The Failure of Drug Policy Reform to Address the Underlying Fallacies of Drug Prohibition. *Criminology & Criminal Justice*. **16** (4) pp. 452-469.
- ter Meulen, R (2017) The Ethical Debate on Human Enhancement and Cognitive Enhancement by way of Biotechnologies. In: ter Meulen, R., Mohamed, A. & Hall, W. eds. *Rethinking Cognitive Enhancement*. Oxford: Oxford University Press. pp. 15-34.
- Teter, C., McCabe, S., LaGrange, K., Cranford, J. & Boyd, C. (2006) Illicit Use of Specific Prescription Stimulants among College Students: Prevalence, Motives, and Routes of Administration. *Pharmacotherapy*. **26** (10) pp. 1501-1510.
- The National Archives. (2014) *Foresight - Research Reviews*. [Online]. [Accessed 13 October 2015]. Available from: <http://webarchive.nationalarchives.gov.uk/20140108150022/http://www.bis.gov.uk/Foresight/our-work/projects/published-projects/brain-science/reports-and-publications/research-reviews>
- Thomas, S. & Williams, T. (2013) Khat (Catha Edulis): A Systematic Review of Evidence and Literature Pertaining to its Harms to UK Users and Society. *Drug Science, Policy and Law*. **0** (0) pp. 1-25.
- Thompson, H. (2010) Why Mass Incarceration Matters: Rethinking Crisis, Decline, and Transformation in Postwar American History. *Journal of American History*. **97** (3) pp. 703-735.
- Thompson, S. & Hoggett, P. (1996) Universalism, Selectivism and Particularism: Towards a Postmodern Social Policy. *Critical Social Policy*. **46** (16) pp. 21-43.
- Traweek, S. (1992 [1988]) *Beamtimes and Lifetimes: The World of High Energy Physicists*. Cambridge: Harvard University Press.
- Vainio, A. (2012) Beyond Research Ethics: Anonymity as ‘Ontology’, ‘Analysis’, and ‘Independence’. *Qualitative Research*. **13** (6) pp. 685-698.

- Vrecko, S. (2013) Just how Cognitive is “Cognitive Enhancement”? On the Significance of Emotions in University Students’ Experiences with Study Drugs. *AJOB Neuroscience*. **4** (1) pp. 4-12.
- Weber, M. (2004a [1917]) Science as a Vocation. In: Owen, D. & Strong, T. eds. *The Vocation Lectures: "Science as a Vocation", "Politics as a Vocation"*. Translated from German by Livingstone, R. Indianapolis: Hackett Publishing Company. pp. 1-31.
- Weber, M. (2004b [1917]) Politics as a Vocation. In: Owen, D.. & Strong, T. eds. *The Vocation Lectures: "Science as a Vocation", "Politics as a Vocation"*. Translated from German by Livingstone, R. Indianapolis: Hackett Publishing Company. pp. 32-94.
- Webster, P. (2003) Learning from History: A Review of David Bewley-Taylor’s The United States and International Drug Control, 1909–1997. *International Journal of Drug Policy*. **14** (4) pp. 343-346.
- Wengraf, T. (2001) *Qualitative Research Interviewing: Biographic Narrative Methods and Semi-Structured Methods*. London: Sage.
- Weyandt, L., Janusis, G., Wilson, K., Verdi, G., Paquin, G., Lopes, J., Varejao, M. & Dussault, C. (2009) Nonmedical Prescription Stimulant use among a Sample of College Students: Relationship with Psychological Variables. *Journal of Attention Disorders*. **13** (3) pp. 284-289.
- Wilkinson, R. & Pickett, K. (2010) *The Spirit Level: Why Equality is Better for Everyone*. London: Penguin.
- Williams, F. (1995 [1989]) *Social Policy: A Critical Introduction: Issues of Race, Gender and Class*. Cambridge: Polity Press.
- Williams, S., Seale, C., Boden, S., Lowe, P. & Steinberg, D (2008) Waking up to Sleepiness: Modafinil, the Media and the Pharmaceuticalisation of Everyday/Night Life. *Sociology of Health and Illness*. **30** (6) pp. 839-855.
- Winch, P. (1964). Understanding a Primitive Society. *American Philosophical Quarterly*. **1** (4) pp. 307-324.
- Winch, P. (2008 [1990]) *The Idea of a Social Science and its Relation to Philosophy*. London: Routledge.
- Wittgenstein, L. (1965 [1929]) I: A Lecture on Ethics. *Philosophical Review*. **74** (1) pp. 3-12.
- Woodward, K. (2015) *Psychosocial Studies: An Introduction*. London: Routledge.
- Yates, R. (2002) A Brief History of British Drug Policy, 1950-2001. *Drugs: Education, Prevention and Policy*. **9** (2) pp. 113-124.
- Young, N., Ioannidis, J. & Al-Ubaydli, O. (2008) Why Current Publication Practices May Distort Science. **5** (10) pp. 1418-1422.
- Zohny, H. (2015) The Myth of Cognitive Enhancement Drugs. *Neuroethics*. **8** (3) pp. 257-269.