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Sociotechnical Innovation in Mental Health: Articulating Complexity

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A. Introduction

The use of innovative technology within psychiatry and psychology has often provoked complex and sometimes acrimonious discussion of law and ethics—as the histories of electro-convulsive therapy and psychopharmaceuticals remind us all too well.[1] The stories of these techniques underscore the great degree to which the mental health professions, and the innovations they give rise to and which function within them, are inherently social. Institutional and political interests, norms, and expectations, shape the acceptance and resistance of technology as well as stimulate further sociotechnical change (including shifts in law and other forms of governance).[2] In this chapter, I seek to cast fresh light on the social dimensions of innovation, health, and regulation through exploring the web of associations constitutive of and engendered by one particular technology: the Diagnostic and Statistical Manual of Mental Disorders (DSM). Popularly known as 'the bible' of psychiatry, the DSM is the official list of psychopathologies recognized by the American Psychiatric Association (APA). The case of the DSM provides an important platform from which the production and circulation of ethics, rights, and risks within psychiatry can be observed, and demonstrates the centrality of 'mundane' technologies (diagnostic handbooks, clinical practice guide-lines, and quality of life indicators) in the networks that produce and sustain more 'novel' biomedical produces and devices, as well as how (biomedical) developments outside Europe can have major transformative effects on European life. Such issues are crucial to explore within socio-legal studies and medical sociology.

   In what follows, I discuss the social dimensions of innovative health technologies broadly, before detailing the development and reception of the seminal third edition of the DSM—the DSM-III—which was released by the APA in 1980.[3] The former task is necessary in order fully to flesh out the conceptual tools and empirical findings that I implicitly and explicitly draw upon in this analysis (and which may be of interest to legal scholars addressing important normative questions about regulation and govern-ance). In discussing the DSM-III, I focus especially on one particular diagnostic category: antisocial personality disorder (ASPD). Personality disorders are 'the Achilles' heel of psychiatry' and 'the bane of law'; here, I show how these constructs are embroiled with mental health research, policy, and practices—and, hence, illustrate

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[1] D Healy, *The Creation of Psychopharmacology* (Harvard UP 2002); E Shorter and D Healy, *A History of Electoconvulsive Treatment in Mental Illness* (Rutgers UP 2007).
[2] cf A Hedgecoe and P Martin, 'The Drugs Don't Work: Expectations and the Social Shaping of Pharmacogenetics' (2003) 33 *Social Studies of Science* 3.
[3] APA, *Diagnostic and Statistical Manual of Mental Disorders* (3rd edn, APA 1980).

how an innovation like the DSM-III can itself effect a range of innovative socio-
technical practices across a range of domains.[4] The DSM-III, rather than later editions
of this handbook, is the primary (but not exclusive) object of concern by virtue of the
disproportionate influence of this volume on science, medicine, and subjectivity
internationally. In the years when DSM-I and -II reigned, it would have been hard
to imagine the import of DSM-III; conversely, the authority of DSM-IV owed much to
the ubiquity of its predecessor.

This chapter is different from the other contributions to this collection, in that its
aim is not, in fact, to provide a specific analysis of the role of a new technology in
European law. Rather, it instead feeds into such issues through its intention to render
problematic the terms under which these debates play out, and hence ultimately seeks
to take regulatory discourses into, as yet, unchartered territories. European institutions,
including the European Union (EU), are increasingly orientating themselves towards
the legal and regulatory challenges that new technologies are deemed to introduce;
indeed, even the European Court of Human Rights has an interest in these issues.[5] Yet,
the relationship of the EU with innovation is ambiguous: even as moves are made to
interrogate the ethical implications of new science and technology, the very same actors
and networks involved can serve to implicitly endorse them.[6] Important parallels can be
made with the EU's efforts to promote citizen participation in governance in ways that
can paradoxically act to disempower them.[7] Innovation, it seems, is often regarded as a
common good—and if some resist then governance regimes that reposition it as such
are seen as being required. National law and policy may, on occasion, also come to be
shaped, challenged, or rendered impotent by, for instance, EU law; this has been made
vividly clear in regard to the use of and access to health technologies.[8] Clearly, then,
there is a need to engage with not only specific technologies and particular regulatory
frameworks, but also with the concepts that animate and direct debates in these arenas.

In focusing on a less obviously sensational technology, this chapter seeks to focus
attention on social, legal, and ethical issues that might otherwise go unnoticed by
lawyers and other regulators. In so doing, I implicitly seek to recontextualize innov-
ation, and indeed regulation more broadly. 'Innovation' is here understood to be an
alignment of tools and practices that occurs within a dynamic matrix of ethics, wider
social norms, markets, and politics. 'Regulation' can be understood not solely as a set of
authoritative rules or directives (such as formalized laws), but also a range of socio-
technical practices that shape institutions and subjectivity either deliberately or other-
wise. Thus, my account deliberately diverts attention away from the specific biomedical
risks that innovative health technologies might present patients, and the ways through
which these are governed by law, and seeks instead to bring broader societal concerns
more sharply into focus. It is hoped that in so doing this analysis may orientate the
reader towards some of the unanticipated and diffuse effects of innovative health

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[4] DN Greig, *Neither Bad Nor Mad: The Competing Discourses of Psychiatry, Law and Politics* (Jessica
Kingsley Publishers 2002) 108.

[5] T Murphy and G Ó Cuinn, 'Works in Progress: New Technologies and the European Court of
Human Rights' (2010) 10 *Human Rights Law Review* 601.

[6] H Busby, T Hervey, and A Mohr, 'Ethical EU Law? The Influence of the European Group on
Ethics in Science and New Technologies' (2008) 33 *European Law Review* 803.

[7] ML Flear, '"Together for Health"? How EU Governance Undermines Active Biological Citizen-
ship' (2008) 26 *Wisconsin International Law Journal* 368; ML Flear and A Vakulenko, 'A Human
Rights Perspective on Citizen Participation in the EU's Governance of New Technologies' (2010) 10
Human Rights Law Review 661.

[8] TK Hervey and JV McHale, *Health Law and the European Union* (CUP 2004).

technologies that are often unheeded (especially in anticipatory governance) but which may nevertheless demand our examination.

In large part, my intent, then, is to begin to chart some of the *complexity* inherent in the articulations between health, technology, and innovation. As Mol and Law define it, a situation is complex 'if things relate but don't add up, if events occur but not within the processes of linear time, and if phenomena share a spare but cannot be mapped in terms of a single set of three-dimensional coordinates.'[9] This definition is itself not transparent, but it directs our analytic gaze to the fact that complex situations are rarely easily factorialized into causative processes and bounded effects. Instead, entities and the sociotechnical networks they are embedded within interact in multiple ways that are not readily made captive by scholars: complex situations are the outcome of ongoing processes of co-production between the material and the semiotic.[10] In this chapter I therefore emphasize the dynamic relationship between mental health, biomedical innovation, and law and regulation, and the ways in which they shape and perhaps form one another.

1. The DSM

First released in 1952, the DSM had no more than subtle effects on the work of US psychiatrists. However, the 1980 third edition (DSM-III) profoundly transformed psychiatric theorization, funding, research, and treatment, as well as the subjective experience of the individuals who came to be classified with one of its labels. Furthermore, the sociotechnical innovation that the DSM-III at once represented and further activated was not restricted to the USA; rather, its effects were felt internationally, particularly within Europe. For instance, professional bodies such as the Royal College of Psychiatrists in the United Kingdom soon adopted the text and its theoretical underpinnings within psychiatric education and practice, introducing its innovative potential to British biomedical and cultural contexts.

The adoption of the DSM-III was facilitated by the lack of formal regulation governing its use both nationally and at the European level, for instance by the EU. It was beyond the regulatory purview of bodies charged with governing the safety and efficacy of medical devices and pharmaceuticals, and the only barrier to its use was the prohibitive cost of purchasing it. Whilst the text itself highlighted the risk of its categories being used by those unschooled in psychiatry, as a book the DSM-III could be bought and sold as any other. Accordingly, the manual came to be at home in the offices and laboratories of a range of actors, including those beyond psychiatry (for example, molecular geneticists and psychologists), and its terminology came to have traction outside the mental health professions (for example, education). The success of the DSM-III in turn innovated the creation of subsequent editions, with the next, fifth edition—the DSM-5—due in 2013. More importantly, the diagnostic categories it contained were performative; they became part of and further stimulated clinically and culturally significant forms of praxis, such as novel scientific research and legal innovations.

Innovative health technologies, like the DSM and the diagnostic categories it contains, have a social life (which affects their regulation, and impacts upon law and governance). They have histories, and exist in a network of inter-dependent relations

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[9] A Mol and J Law, 'Complexities: an introduction' in J Law and A Mol (eds), *Complexities: Social Studies of Knowledge Practices* (Duke UP 2002) 1.

[10] cf S Jasanoff, 'Ordering Knowledge, Ordering Society' in S Jasanoff (ed), *States of Knowledge: The Co-Production of Science and Social Order* (Routledge 2004).

with other sociotechnical objects and practices. Such networks enable the mobility of technologies, between countries, and between the courts, the policy room, the laboratory, and the clinic. Innovative health technologies are not just enmeshed within clinical life, but are part of society more broadly—and should be regulated accordingly. This active social life relies upon, supports, and animates existing and novel material-semiotic entities: diagnostic practice, drug development, legal precedent, and so on. In turn, these feedback and (re)shape the innovation itself. In the next section, I discuss some of the existing (predominantly) sociological work relating to this point, which sets the scene for a more focused analysis of the DSM.

B. Health, Technology, and Society

As assemblages of interacting institutional, material, and symbolic elements that reciprocally shape one another, 'health', 'technology', and 'society' can be understood to be material-semiotic hybrids that exist through mutually constitutive relationships. Accordingly, analytic purchase on any one of these categories might more firmly be sought by considering these relations. Sociological studies of biomedical innovations have rendered this relationality into sharp relief. In everyday life, health, technology, and society intermingle in almost tangible ways, as evidenced in particular through concerns around the ubiquity of pharmaceuticals.

As with technology more broadly, health innovations are formed through complex processes that are at once political, gendered, and classed, and involve actual and imagined users in as much as technologists themselves.[11] In spite of widespread appeals to 'innovate' within biomedicine and elaborate funding strategies designed to support this, innovation is therefore not an unproblematic process. Aside from the obvious technical issues involved, 'bringing a technology into existence' is, as sociologist Adam Hedgecoe reminds us, a 'complicated and fraught process' wherein the social is 'central'.[12]

In particular, (prospective) innovation within biomedicine may engender considerable public and regulatory unease.[13] Such disquiet can have diverse effects on the governance of biomedicine by law and policy, and hence on the scope and nature of the technologies that may result from it. Formal mechanisms of governing scientists and engineers likewise interact with their own personal and professional ethical and social norms, further impacting on the ways in which investigations are progressed and the kinds of studies that are undertaken.[14]

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[11] D MacKenzie and J Wajcman (eds) *The Social Shaping of Technology, Second Edition* (Open UP 1999); R Williams and D Edge, 'The Social Shaping of Technology' (1996) 25 *Research Policy* 865; L Winner, 'Do Artefacts Have Politics?' (1980) 109 *Daedalus* 121; S Woolgar, 'The Turn to Technology in Social Studies of Science' (1991) 16 *Science, Technology & Human Values* 20; S Woolgar, 'Configuring the User: The Case of Usability Trials' in J Law (ed), *A Sociology of Monsters: Essays on Power, Technology and Domination* (Routledge 1991).

[12] A Hedgecoe, *The Politics of Personalised Medicine: Pharmacogenetics in the Clinic* (CUP 2004) 28.

[13] N Brown, A Faulkner, J Kent, and M Michael, 'Regulating Hybrids: "Making a Mess" and "Cleaning Up" in Tissue Engineering and Transpecies Transplantation' (2006) 4 *Social Theory and Health* 1; A Faulkner, I Geesink, J Kent, and D Fitzpatrick, 'Tissue-Engineered Technologies: Scientific Biomedicine, Frames of Risk and Regulatory Regime-Building in Europe' (2008) 17 *Science as Culture* 195; J Kent and N Pfeffer, 'Regulating the Collection and Use of Fetal Stem Cells' (2006) 332 *British Medical Journal* 866; S Wright, *Molecular Politics: Developing American and British Regulatory Policy for Genetic Engineering, 1972–1982* (Chicago UP 1994).

[14] M Pickersgill, 'The Co-Production of Science, Ethics and Emotion' (2012) *Science, Technology & Human Values* 579.

This is not, of course, to say that regulators are necessarily acting to limit innovation in any kind of quantitative way. Rather, regulation may effect a qualitative shift in the kinds of health technologies that come to be developed. Furthermore, in responses to various claims that there is an innovation 'crisis'—particularly in regards to the pharmaceutical industry—regulation can itself be employed to support and encourage innovation. For instance, regulatory bodies such as the European Medicines Agency are increasingly reconfiguring themselves from 'guardians' of public health into stewards that play 'a key role in promoting innovation'.[15] In so doing, the EU simultaneously contributes to the promotion of the diagnostic standards which detail the disease constructs that pharmaceuticals purport to treat. In the case of the DSM, this may contribute to its reification as an innovative health technology through indirectly facilitating drug innovation.

Promissory discourse plays an important role in efforts to realize the potential of new and imagined therapies for biomedical practice, wherein institutional and material expectations are 'intimately entwined'.[16] Indeed, it may be that regulatory practices themselves help to enjoin the crystallization of speculation and anticipation about the future into specific, articulable expectations.[17] Translating new health technologies into clinical practice is thus far from simple: technologies 'do not simply arrive in the health market'—this itself 'has to be created, and clinicians and patients, regulatory agencies and health authorities all have to see them as of value'.[18]

This draws our attention to the fact that innovative health technologies are rarely regarded as 'simply good or bad—as if they were absolute standards. Rather they are better or worse': health professionals compare innovations with the tools they already have at their disposal, in terms of multiple dimensions of risk, likely patient compliance, long-term efficacy, cost, and so on.[19] Such comparisons enable a technology to be considered in terms of clinical utility; this is an aspect of innovation that is inherently relational and specific to the sociotechnical milieu within which the object in question is situated, as well as to the epistemological and ontological assumptions and norms operative therein. Usefulness is not simply about clinical benefit, therefore, but also relates to a 'clinician's view of their social and ethical duty towards an individual patient and their family'—that is, on an individual assessment of their duty of care.[20] It is also about the degree to which an innovation 'can be translated into the more everyday world of the technology users'—how well it aligns with current practice and is constructed as being, in the idiom of Clarke and Fujimura, the 'right tool for the job'.[21]

[15] SJ Williams, P Martin, and J Gabe, 'The Pharmaceuticalisation of Society? A Framework for Analysis' (2011) 33 *Sociology of Health & Illness* 710, 715; C Davis and J Abraham, 'Desperately Seeking Cancer Drugs: Explaining the Emergence and Outcomes of Accelerated Pharmaceutical Regulation' (2011) 33 *Sociology of Health & Illness* 731.

[16] SP Wainwright, C Williams, M Michael, B Farsides, and A Cribb, 'From Bench to Bedside? Biomedical Scientists' Expectations of Stem Cell Science as a Future Therapy for Diabetes' (2006) 63 *Social Science and Medicine* 2052, 2062.

[17] R Tutton, 'Promising Pessimism: Reading the Futures to be Avoided in Biotech' (2011) 41 *Social Studies of Science* 411.

[18] A Webster, 'Innovative Health Technologies and the Social: Redefining Health, Medicine and the Body' (2002) 50 *Current Sociology* 443, 451.

[19] A Mol, 'Cutting Surgeons, Walking Patients: Some Complexities Involved in Comparing' in Law and Mol (n 9) 218.

[20] Hedgecoe (n 12).

[21] Webster (n 18) 443; A Clarke and J Fujimura (eds), *The Right Tools for the Job* (Princeton UP 1992).

This is a point that may be lost in attempts to regulate to encourage the employment of one tool or technique over another. More generally, the polyvalence of 'clinical benefit' and the imperative of clinical usefulness raise questions about the effectiveness of regulatory regimes that attempt to capture utility in terms of efficacy that reduce this to, for instance, the material properties of an innovation (be it a drug or other form of innovation), rather than understand it as a dynamic concept that can only really be understood in terms of how a new technology may come to be embedded within the sociotechnical world of the clinic.

If a new health technology does become operative within the clinic, it may go on to have effects far beyond those initially conceived. This is a direct consequence of the web of interactions between institutions, tools, and users that constitute the 'context' within which the innovation is implemented. Technologies interact with, mediate, and form social relationships and conceptions of selfhood. Within medicine, innovative tools and techniques may transform our understandings of the human body and the nature of normality and pathology. Such transformations in the regimes of knowledge and normativity help to reshape shape research trajectories, expectations about medical futures, and, thus, the innovation pathway itself.[22]

Technologies 'can indeed be constitutive of new social dynamics, but they can also be derivative or merely reproduce older conditions.'[23] This is as a consequence of the fact that social values are embedded in tools and techniques: artefacts have politics.[24] Ideas about the correct use of a technology are literally built into innovations; these imply particular views of who counts as an appropriate user, and hence imaginaries of society more broadly are materialized. This is commonly referred to as the 'inscription' of technological objects, whereby the result is that users are enjoined to follow particular scripts when using the technology—though users may well find ingenious ways of rewriting these.[25]

Accordingly, though innovation, health, and society may be shaped through regulatory processes, technology can also act as a form of regulation in its own right since it forces certain kinds of human behaviour whilst removing the conditions of possibility for others—including through shaping the law itself.[26] In medicine as elsewhere this may be problematic, since although 'technology can have profound regulatory effects', it often lacks 'the safeguards built into democratic systems of rule-making and enforcement'.[27] One form of innovation that often tends to exert regulatory effects within biomedicine is the humble clinical standard. Standardization can be usefully regarded as 'the process of rendering things uniform', whilst a standard is both the 'mean and outcome' of this.[28] Accordingly, clinical standards include design standards,

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[22] P Martin, 'Genes as Drugs: The Social Shaping of Gene Therapy and the Reconstruction of Genetic Disease' (1999) 21 *Sociology of Health & Illness* 517; K Wailoo, *Drawing Blood: Technology and Disease Identity in Twentieth-Century America* (Johns Hopkins UP 1997).

[23] S Sassen, 'Towards a Sociology of Information Technology' (2002) 50 *Current Sociology* 365, 365.

[24] Winner (n 11).

[25] M Akrich, 'The De-scription of Technical Objects' in WE Bijker and J Law (eds), *Shaping Technology/Building Society: Studies in Sociotechnical Change* (MIT Press 1992).

[26] T Dant, 'Material Civilization: Things and Society' (2006) 57 *British Journal of Sociology* 289; J Johnson [B Latour], 'Mixing Humans and Non-Humans Together: The Sociology of a Door-Closer' (1998) 35 *Social Problems* 298; H Landecker, 'Between Beneficence and Chattel: the Human Biological in Law and Science' (1999) 12 *Science in Context* 203.

[27] K Yeung and M Dixon-Woods, 'Design-Based Regulation and Patient Safety: A Regulatory Studies Perspective' (2010) 71 *Social Science and Medicine* 502, 503.

[28] S Timmermans and M Berg, *The Gold Standard: The Challenge of Evidence-Based Medicine and Standardization in Health Care* (Temple UP 2003) 24.

performance standards, and terminological standards, the latter of which would include diagnostic manuals (such as the DSM) that collect together lists of diseases and define their nature.[29] Today, they are ubiquitous within 'Western' medicine.[30]

Though complex to produce, standards act as a vital form of infrastructural support to medical practice—and indeed to professional work and social life more broadly.[31] Within research, they act as 'a collective good, or necessary evil, that will provide scientists with comparable data and thus the basis on which to make general claims'.[32] As such, they are 'necessary for knowledge communication, research collaboration, and consistent diagnosis in an increasingly globalized world'.[33] In clinical practice, standards manage uncertainty and direct the medical gaze, rendering complex decision-making around treatment and diagnosis comprehensible, accountable, and legitimate.[34] In the words of Timmermans and Berg, the 'implementation of clinical practice guidelines or novel nomenclatures generates action and creates new forms of life'.[35] Standards, then, do not simply *regulate* biomedical work—they *transform* it.

In this way, we might understand standards as a form of technology—and, indeed, law and formalized ethical systems as well.[36] Technology might best be defined here as an artefact that enables symbolic or material change. Standards may thus emerge through processes of innovative research, but they are also agents of innovation: they can stimulate new ways of working, new kinds of professional relationships, new institutional and regulatory orders, and the production of new knowledge. Obviously, though, standards do not necessarily and always lead to radical change. As a technology, the effects of innovative standards on (mental) health practice may be marginal—as the discussion earlier on the problems of translation indicates.[37] Furthermore, whilst standards may seek to discipline the ontology of pathology and render it more amenable to research and clinical intervention, contestation may remain—perhaps especially in mental health.[38] However, subtle changes may have profound consequences, and some clinical standards within psychiatry and psychology have resulted in major effects in the ways in which health and subjectivity are imagined and made governable.

One of the most important and influential of such standards is the DSM. As a health technology, it is at once an example of innovation and a tool with which to innovate. As we will see, it has had diverse effects on the ways in which mental health is theorized,

[29] Timmermans and Berg (n 28) 25.

[30] G Weisz, A Cambrosio, P Keating, L Knaapen, T Schlich, and VJ Tournay, 'The Emergence of Clinical Practice Guidelines' (2007) 85 *Millbank Quarterly* 691.

[31] T Moreira, C May, and J Bond, 'Regulatory Objectivity in Action: Mild Cognitive Impairment and the Collective Production of Uncertainty' (2009) 29 *Social Studies of Science* 665.

[32] L Eriksson and A Webster, 'Standardizing the Unknown: Practicable Pluripotency as Doable Futures' (2008) 17 *Science as Culture* 57, 59.

[33] CD Wylie, 'Setting a Standard for a "Silent" Disease: Defining Osteoporosis in the 1980s' (2010) 41 *Studies in the History and Philosophy of Biological and Biomedical Sciences* 376.

[34] GC Bowker and SL Star, *Sorting Things Out: Classification and its Consequences* (MIT Press 1999).

[35] Timmermans and Berg (n 28) 23.

[36] Pickersgill, 'Standardising Antisocial Personality Disorder: The Social Shaping of a Psychiatric Technology' (2012) 24 *Sociology of Health & Illness* 544.

[37] M Barley, C Pope, R Chilvers, A Sipos, and G Harrison, 'Guidelines or Mindlines? A Qualitative Study Exploring what Knowledge Informs Psychiatrists' Decisions about Antipsychotic Prescribing' (2008) 17 *Journal of Mental Health* 9.

[38] L Knaapen and G Weisz, 'The Biomedical Standardization of Premenstrual Syndrome' (2008) 39 *Studies in the History and Philosophy of Biological and Biomedical Sciences* 120.

researched, and treated, with broad implications for the regulation of biomedicine and the governance of everyday life—including the marketing of medications, the risks associated with these, the rights of the consumer, and the legal administration of those ascribed with DSM disorders.

C. Ordering Disorder

The first edition of the DSM is widely held as emerging from a concern within the APA regarding the 'nosological confusion, proliferation of nomenclatures, and shift towards psychodynamic and psychoanalytic concepts' that characterized US psychiatry in the post-war era.[39] An important moment in mental health, the release of this manual nevertheless provoked far less attention than subsequent revisions; the DSM-II, published in 1968, was far more widely heralded (and sometimes critiqued). One aim of the new text was to complement, if not directly challenge, the authority of the World Health Organization's International Classification of Diseases: DSM-II was viewed by some in the APA as representing 'a significant advance toward the use of a standard international classification system to facilitate the exchange of ideas among psychiatrists of all countries'.[40]

As the DSM-I and, in particular, the DSM-II began to find traction within psychiatry and mental health more widely, broader shifts were occurring within the landscape of US psychiatric theory, research, and practice. In particular, gradual moves from psychoanalytic to more somatic styles of thought were taking place. These were supported by the activities of the major funding and research agency, the National Institute of Mental Health (NIMH), whose attention came to be increasingly fixed upon the sponsorship of more 'scientific' biological work and training. Nevertheless, the NIMH continued to fund investigations that took psyche and society as their focus. Such heterogeneity on the part of this premier biomedical funding body was reflected within the aetiological accounts of individual psychiatrists.[41] When articulating the potential causes and treatments for mental disorder, these professionals' writings in key journals were highly eclectic. In so doing, they built models of disease that drew upon a wide range of biological, psychological, and environmental or social 'factors'.

Heterogeneous approaches to mental health did not, however, prevent either the fall of certain perspectives, or the rise of others. As noted earlier, from the mid-20th century onwards psychoanalysis began—slowly but surely—to lose support in the USA whilst discourse regarding the bodies of the mentally ill became re-energized. As the 1980s began, this turn towards what many called 'biological psychiatry' was markedly evident. Somatic approaches were deemed more scientific than psychoanalytic perspectives, and attracted considerable funding and prestige. This reconstitution of psychiatry as a justifiable division of US biomedicine was, in part, stimulated by attacks on the legitimacy of the expertise psychiatrists professed to possess. It was also animated by the development, decreasing expense, and proliferation of genetic and neuroscientific technologies that lent themselves well to the investigative aims of those who sought to study psychopathology 'scientifically'. Such a shift was both reflected in and furthered

[39] GN Grob, 'Origins of DSM-I: A Study in Appearance and Reality' (1991) 148 *American Journal of Psychiatry* 421, 428.
[40] RL Spitzer and PT Wilson, 'A Guide to the American Psychiatric Association's New Diagnostic Nomenclature' (1968) 124 *American Journal of Psychiatry* 1619, 1619.
[41] M Pickersgill, 'From Psyche to Soma? Changing Accounts of Antisocial Personality Disorders in the American Journal Psychiatry' (2010) 21 *History of Psychiatry* 294.

by the release of a new APA nosology—a very different kind of technology—in 1980: the DSM-III.

The development of the DSM-III was led by Columbia University psychiatrist Robert Spitzer, and the work of the DSM-III Task Force was marked by a series of complex negotiations that belied the 'objective' nature of the psychiatric technology it sought to develop. In particular, many felt that Spitzer and colleagues intended to implicitly introduce a more somatic focus to psychiatry through the DSM-III—an aim that did not go unchallenged by psychoanalysts. One point of controversy was the proposed removal of the concept of 'neurosis'.[42] Though psychoanalysts had traditionally been relatively unconcerned with diagnostic categories, neuroses were fundamental to their theoretical frameworks: omission from the new DSM would thus be a serious affront. Consequently, psychoanalysts sought to reshape the processes of innovation underlying the emerging technology of the DSM-III, mobilizing against Spitzer and his committee. Spitzer was nevertheless successful in 'curing' the DSM of neurosis, and in largely removing from this new technology any circuits that enabled psychoanalytic power still to flow.

Instead of privileging the psychosocial, the DSM-III was therefore structured by more biological assumptions—though Spitzer himself denied that the manual was 'covertly committed to a biological approach to explaining psychiatric disturbance'.[43] Regardless, with the DSM-III Spitzer helped to orientate the professional focus of US mental health professionals towards a more biological, 'scientific' psychiatry.[44] Moreover, the empirical research drawn upon in the development of this new diagnostic technology helped to justify the notion that the disorders it listed were discrete and observable natural kinds, contributing to diminishing the claims of critics who thought mental illness nothing but a myth.[45]

The DSM-III was especially important in helping to make the study of psychopathology what Fujimura might call a more 'do-able' problem: using this innovative standard, mental illness could be characterized, categorized, interrogated, and manipulated.[46] Articulated through experimental paradigms and large-scale pharmaceutical studies, the DSM-III disorders were made real. The DSM-III was salient in furthering the 'technosomatic shift' in psychiatry: an increased emphasis on the bodies of the mentally ill, and on technologies such as neuroimaging techniques to visualize these.[47]

As Mol has shown for arterial disease, the technologies through which disease is pictured by physicians (for example, via X-ray, using angiograms, or through observation in the clinic) informs the treatments that are prescribed for it.[48] In the case of mental health, new methods of visualizing the brains of individuals with attention deficit disorder, schizophrenia, and a range of other disorders, contributed to rendering treatments that acted directly upon the soma more legitimate and desirable. Yet, such images did not directly indicate what kinds of therapeutic innovations were necessary, nor could they answer more profound questions about the ontology of the disease itself.

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[42] R Mayes and AV Horwitz, 'DSM-III and the Revolution in the Classification of Mental Illness' (2005) 41 *Journal of the History of the Behavioral Sciences* 249.

[43] RL Spitzer, 'Values and Assumptions in the Development of DSM-III and DSM-III-R: An Insider's Perspective and a Belated Response to Sadler, Hulgus, and Agich's "On values in Recent American Psychiatric Classification"' (2001) 189 *Journal of Nervous and Mental Disease* 351, 351.

[44] Mayes and Horwitz (n 42).

[45] Mayes and Horwitz (n 42).

[46] J Fujimura, 'Constructing "Do-able" Problems in Cancer Research: Articulating Alignment' (1987) 17 *Social Studies of Science* 257.

[47] Pickersgill (n 41).   [48] Mol (n 19).

Rather, what came often to occur was a co-production of the disorder and its treatment.[49]

In regards to the effects of the APA manuals on psychiatry and psychology internationally, although some clinicians drew attention to the limitations of the DSM-III many others appeared to take the innovative diagnostic technologies it contained to be established frameworks that were more than acceptable for application within research and practice. Not everyone, of course, was happy about the increased 'Americanization' of mental health, 'medicalization' of burdens of everyday life, and positioning of pharmaceuticals as 'fixes' for these.[50] In spite of these caveats it is nevertheless clear that, to a significant degree, European psychiatry and psychology came to be closely aligned with the USA in terms of nomenclature from the late 20th century onwards—with the wide circulation of the DSM-III playing a vital role in this shift.

D. Pathological Antisociality and the Social Life of Antisocial Personality Disorder

In this section, I move away from analysing the DSM-III in general towards the examination of one specific diagnostic innovation contained therein: antisocial personality disorder (ASPD), a terminological standard aimed at capturing pathological antisociality. First introduced into the psychiatric vocabulary in the 1970s, ASPD is used to categorize individuals who are considered to have a pervasive disregard for the rights and feelings of others. This might entail the violation of social and legal norms, underpinned by a lack of empathy and concern for the safety of self and others, and an excess of recklessness and aggressiveness. Since its introduction, discourse centring on ASPD has been voluminous and sometimes fractious within US and European psychiatry. Today, the diagnosis remains salient for mental health practitioners internationally, with discussions about its validity ongoing—not least as a consequence of the writing of a new DSM and the anticipatory debate this has impelled. In order to more fully account for the impact of this technology, I first chart how the mental health professions 'managed' antisocial behaviour prior to the introduction of ASPD.

Personality disorders have a long history within psychiatry, with categories such as psychopathic personality disorder (psychopathy) dating back to the 19th century.[51] In US psychiatry, both psychopathy and sociopathic personality disorder (sociopathy) have played important roles as diagnostic labels for the concept of antisociality that psychiatrists have considered their concern. The sociopathy construct was associated primarily with social deviance, and used by psychiatrists to refer to antisocial individuals. It appeared in various forms within the first and second editions of the DSM (DSM-I and -II), although these differences tended to be elided when the diagnosis was invoked in contributions to practitioner journals. Psychopathy, on the other hand, was never an 'official' diagnosis. Nevertheless, in spite of its absence from the APA nomenclature, this construct played a prominent role in

[49] N Rose, 'Neurochemical Selves' (2003) 41 *Society* 46.

[50] A Lakoff, *Pharmaceutical Reason: Knowledge and Value in Global Psychiatry* (CUP 2005); S Lloyd, 'The Clinical Clash over Social Phobia: The Americanization of French Experience?' (2006) 1 *BioSocieties* 229; S Scott, 'The Medicalisation of Shyness: From Social Misfits to Social Fitness' (2006) 28 *Sociology of Health & Illness* 133.

[51] GE Berrios, 'European View on Personality Disorders: A Conceptual History' (1993) 34 *Comprehensive Psychiatry* 14; H Werlinder, *A History of the Concepts. Analysis of the Origin and Development of a Family of Concepts in Psychopathology* (Almqvist and Wiksell International 1978).

discussions of antisocial personality, appearing, for instance, in articles within leading publications such as the *American Journal of Psychiatry*. Gradually, the concept came to be associated primarily with the ideas of US psychiatrist Hervey M Cleckley, and, following conceptual innovation in the 1970s, with the prominent Canadian psychologist Robert Hare.

Psychopathy remains prominent within clinical, scientific, and popular cultures, and those characterized as psychopaths continue to prove compelling to a variety of publics in the USA and Europe.[52] In spite of its lack of official standing within psychiatry, the category is nevertheless a long-standing and well-known measure of personality pathology within the discipline of psychology, where much of the research and theorization relating to psychopathy is undertaken. Moreover, despite not featuring in the DSM as such, ideas associated with the category are embedded within many of the formulations of pathological antisociality that have appeared in this manual over the last sixty years; the ambiguous category of psychopathy has thus continued to resonate through clinical, scientific, and popular discourse, profoundly shaping the later development of diagnostic criteria associated with antisocial behaviour.[53] Furthermore, many mental health professionals regard psychopathy as broadly similar to DSM diagnoses that seek to capture antisocial behaviour.

Within Europe, psychiatrists had likewise long been concerned with personality disorders relating to antisocial behaviour. However, without the DSM and the diagnostic innovation it enjoined, psychiatrists had fewer categorizations available to employ in order to describe individuals who were deemed to exhibit pathological forms of antisociality; for many years, discourse revolved almost exclusively around psychopathy. In the United Kingdom, for instance, as in the USA, psychopaths were viewed as manifestly antisocial, and a wide variety of aetiological models were put forward to explain the development of their personality disorder. However, in general, UK framings of psychopathy in the mid-20th century resonated more with somatic than psychic perspectives. This was a marked contrast to US aetiological accounts, which tended to be situated in a psychoanalytic rubric even as they drew on somatic ideas.

This disjuncture is less surprising when we bear in mind broader psychiatric discourse in the USA and the United Kingdom. In both countries, developmental narratives for antisociality reflected the dominant approaches of each nation's psychiatry. For the most part, UK practitioners tended to be orientated more explicitly towards biology and materialist conceptions of mental disorder than their counterparts across the Atlantic. In neither case, though, were these broader trends hegemonic, allowing the proliferation of diverse models, understandings, and practices. Furthermore, if British mental health professionals and their colleagues in the USA were alike in producing diverse articulations of psychopathy, they were similar too in their frustration with the ambiguity of this category. However, here, too, there were key differences. Whilst contributors to US journals lamented the lack of clarity regarding what precisely the classification of psychopathy referred to, psychiatrists and commentators in the United Kingdom more frankly admitted their ignorance.

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[52] eg J Blair, D Mitchell, and K Blair, *The Psychopath: Emotion and the Brain* (Blackwell Publishing 2005); J Clarke and A Shea, *Psychopaths: Inside the Minds of the World's Most Wicked Men* (John Blake 2004); B Oakley, *Evil Genes: Why Rome Fell, Hitler Rose, Enron Failed, and My Sister Stole My Mother's Boyfriend* (Prometheus Books 2007); J Ronson, *The Psychopath Test: A Journey Through the Madness Industry* (Picador 2011).

[53] Pickersgill (n 36).

These concerns became acute as a consequence of the legal role the category played. The 1959 and 1983 Mental Health Acts of England and Wales both included and loosely defined the category of 'Psychopathic Disorder', which was viewed as approximately equivalent to the clinical term psychopathy. In the United Kingdom, the lack of consensus on psychopathy thus had significant legal implications and, therefore, social and ethical consequences. These issues were not irrelevant to US psychiatrists and lawyers; however, in the United Kingdom, the frank admissions of ignorance regarding psychopathy by even very senior commentators led to the clinical and legal uncertainties associated with the disorder being seen as particularly problematic. What was psychopathy, and who were psychopaths? How could the disorder be reliably recognized? More importantly, how could this identification be achieved legitimately, without falling into the trap of explaining both psychological and social deviancy using the terms of the other? There was no consensus regarding any of these questions. The ambivalences, uncertainties, and frustrations occasioned by pathological antisociality thus endured into the mid-late 20th century.

1. Introducing ASPD

Things began to change, however, in the 1980s, when the popular DSM-III formalized ASPD (the original criteria for which were written by the Personality Disorder Advisory Committee headed by Robert Spitzer himself). Operating as part of the broader political ecology of the DSM-III, this was not a committee of equals. Rather, some voices were allowed to achieve greater volume than others; conversely, some members, though ostensibly vocal, were effectively silenced.[54] A complex tangle of personal and professional associations could be discerned as operative within the Committee, the dynamics of which reflected and informed the kinds of expertise deemed by Spitzer to be legitimate. In particular, the Committee included prominent sociologist Lee N Robins, highly regarded for her work on sociopathy. Robins had long-standing ties to Spitzer, whose empiricist sensibilities aligned well with her own behaviourist inclinations. Her influence on ASPD was markedly apparent, the criteria of which relied heavily on the identification of specific antisocial behaviours (such as stealing and promiscuity).

Rather than psychopathy, ASPD continued to be used in the revised edition of the DSM-III released in 1987 (the DSM-III-R). It also appeared in the later DSM-IV, published in 1994, and, indeed, in its revised version, DSM-IV-TR, published in 2000. Though the next iteration of the APA diagnostic manual looks set more explicitly to engineer a rapprochement between ASPD and psychopathy, the former category has been very successful in terms of the research, policy, and clinical attention it has attracted.

Despite a rapid uptake, the ASPD diagnostic was not without its problems, however; its validity and conceptual underpinnings were debated in both the United Kingdom and, especially, the USA. As a form of diagnostic innovation, some controversy also formed around ASPD. In particular, the closeness of ASPD to everyday understandings of social deviancy was construed as a matter of concern, underscoring the enduring ontological uncertainties associated with personality disorder. Anthropologist Nuckolls has argued that ASPD has a history that represents 'values strongly congruent with familiar cultural stereotypes', such as 'the "independent" male'.[55] Accordingly, we should perhaps not be surprised that mental health professionals themselves are

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[54] C Lane, *Shyness*: *How Normal Behavior Became a Sickness* (Yale UP 2007).
[55] CW Nuckolls, 'Toward a Cultural History of the Personality Disorders' (1992) 35 *Social Science and Medicine* 37.

aware of the risks and tensions of using ASPD to label the bad behaviour of some individuals, especially men, as a form of psychological dysfunction.

Furthermore, there has been what is sometimes acrimonious debate regarding whether ASPD and psychopathy can be taken to be synonymous constructs.[56] One trope within the mental health literature on this subject holds that ASPD is associated with impulsive and aggressive behaviour, whereas for psychopathy the nature of antisociality may be quite different (for example, property crime rather than assault), indicating more premeditation.[57] In turn, some investigators regard these different types of antisocial behaviour as reflected in distinct forms of aggression—reactive versus impulsive variants—that are underpinned by separate neurobiological pathways.[58] Universal agreement on this matter remains lacking, however.

The question itself—are ASPD and psychopathy 'the same'?—is one that has implications that pervade forensic mental health. That it is an epiphenomenon of the diagnostic innovation that produced the former construct in no way diminishes its import; rather, this epiphenomenal aspect precisely illuminates the unanticipated effects of innovation in regards to the creation of new forms of social and clinical life, and the simultaneous production of novel normative dilemmas. In other words, the fact that a debate emerges in part as a consequence of an innovation does not mean that it lacks salience to the analyst—to dismiss contestation as 'merely' an (inevitable) result of the introduction of innovative technologies would be to miss the extent to which these can transform the very clinical and political contexts within which they have come to be embedded, and enjoin new questions about rights, risks, and responsibilities.

In particular, the lack of a consensus regarding the relationship between ASPD and psychopathy results in much uncertainty on the part of those who research and treat these disorders.[59] This in and of itself has ethical significance; for instance, when an individual is labelled with (for example) ASPD, and is treated by different individuals throughout their 'career' within mental health services. Whilst some professionals may take ASPD and psychopathy to be roughly isomorphic, others believe firmly that these are distinct disorders and that psychopathy is 'worse' than ASPD. The therapeutic and judicial implications of this disagreement multiply when we take into account the fact that some mental health professionals consider psychopathy to be resistant to treatment. Access to services may thus become compromised, potentially mid-way through an individuals therapeutic journey. Recommendations for release dates from prison can, in some circumstances, also be affected by what diagnostic labels an individual has attracted, and what is the perceived relationship between these and criminal recidivism. The rights of an individual understood as pathologically antisocial thus relate closely to what specific diagnostic label they are ascribed with. Unfortunately, practice guidelines seem only to further complicate the ontological and normative issues at stake.[60]

[56] eg BA Arrigo and S Shipley, 'The Confusion over Psychopathy (I): Historical Considerations' (2001) 45 *International Journal of Offender Therapy and Comparative Criminology* 325; RD Hare, SD Hart, and TJ Harpur, 'Psychopathy and the DSM-IV Criteria for Antisocial Personality Disorder' (1991) 100 *Journal of Abnormal Psychology* 391; JRP Ogloff, 'Psychopathy/Antisocial Personality Disorder Conundrum' (2006) 40 *Australian and New Zealand Journal of Psychiatry* 519.

[57] eg JI Warren and SC South, 'Comparing the Constructs of Antisocial Personality Disorder and Psychopathy in a Sample of Incarcerated Women' (2006) 24 *Behavioral Sciences and the Law* 1.

[58] eg RJR Blair, 'Neurocognitive Models of Aggression, the Antisocial Personality Disorders, and Psychopathy' (2001) 71 *Journal of Neurology, Neurosurgery, and Psychiatry* 727.

[59] M Pickersgill, '"Promising" Therapies: Neuroscience, Clinical Practice, and the Treatment of Psychopathy' (2011) 33 *Sociology of Health & Illness* 448.

[60] MD Pickersgill, 'NICE Guidelines, Clinical Practice and Antisocial Personality Disorder: The Ethical Implications of Ontological Uncertainty' (2009) 35 *Journal of Medical Ethics* 668.

For mental health professionals, scientists, and policymakers, the ambiguous relationship between ASPD and psychopathy is far from the only uncertainty associated with the former construct. Regarded as a global personality dysfunction, rather than a discrete disorder that, like schizophrenia or depression, is associated with certain dysfunctions of cognition or affect, the ethical and clinical basis for the position of ASPD and other personality disorders as objects of psychiatric concern has been repeatedly considered and negotiated.[61] Though today there is, generally, agreement that conditions like ASPD legitimately come within the purview of psychiatry and psychology, personality disorders are not usually considered mental illnesses, in part due to their global nature but also as a consequence of their endurance and pervasiveness within an individual.[62] This has major implications for services for personality disorder in general, and ASPD in particular. Who should take responsibility for them, where these should be located, how much money should be invested in them, who should be allowed access, and what they should look like remain pressing political and clinical questions that are difficult to answer.

What is clear, however, is that a large number of individuals meet the criteria for ASPD, and that these individuals are primarily men. This is evidenced by, for example, a survey conducted by the UK Office for National Statistics in the late 1990s, which found that 63 per cent of males on remand, 49 per cent of males sentenced, and 31 per cent of all female prisoners met the DSM criteria for ASPD.[63] Individuals living under the label of ASPD thus straddle the boundaries between normality and pathology, criminology and mental health. To what extent does personality disorder simply represent an extreme of 'normal' social deviancy? Are those characterized with ASPD 'mad' or 'bad'? Does it even make sense to frame debates this way? To what extent are criminal offenders with a personality disorder responsible for their actions, and what are the implications of this for their management? In terms of policy, should offenders diagnosed with personality disorder come under the remit of the Department of Health or the Home Office? Should they be managed within prisons or hospitals? To what extent does the DSM category of ASPD construct the riskiness of the individual that the criteria aim to capture? The questions multiply, but consensus around answers remains lacking, even as policies are necessarily made and implemented.

One response to these perhaps intractable questions has been to further research into pathological antisociality, and in ways that are acceptable within the limits set by the dominant epistemological norms of mental health (themselves tightly bound to the kinds of investigations the DSM enables). If, from the 1980s, professionals and patients in the USA were increasingly framing disorders such as schizophrenia and depression in biological terms, psychiatrists and psychologists in the United Kingdom (and elsewhere in Europe) were also moving further towards technosomatic approaches to the study and management of mental illness. The new DSM-III diagnostic ASPD, alongside a novel psychometric test called the Psychopathy Checklist (developed by Canadian psychologist Robert Hare), allowed biomedical investigations of personality disorder to become more standardized and, therefore, 'scientific'. This was particularly important for UK mental health professionals, many of whom had long been frustrated with the diverse

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[61] N Eastman and B Starling, 'Mental Disorder Ethics: Theory and Empirical Investigation' (2006) 32 *Journal of Medical Ethics* 94.

[62] RE Kendell, 'The Distinction Between Personality Disorder and Mental Illness' (2002) 180 *British Journal of Psychiatry* 110.

[63] N Singleton, H Meltzer, and R Gatward, *Psychiatric Morbidity Among Prisoners in England and Wales* (HMSO 1997).

understandings of and management practices for these conditions. These issues were increasingly pressing following the introduction of a new Mental Health Act in 1983. The 'culmination of a vigorous reforming campaign' articulated 'in terms of rights', the Act included new criteria for the management of offenders categorized with an antisocial personality disorder.[64]

Subsequently, as a consequence of its prevalence and perceived costs to society, ASPD has reached new prominence within the United Kingdom. Specifically, this has been in relation to the drafting of controversial mental health legislation referring explicitly to personality disorder.[65] In 1999, plans began to ferment regarding the reformation of the 1983 Mental Health Act of England and Wales. Whilst the inclusion of the ambiguous category of psychopathy within English and Welsh mental health law had long led to various debates about personality disorders, legislative scrutiny of these conditions was especially marked from 1999 to 2007. Here, again, 'rights' came to the fore; in particular, a number of debates played out regarding the extent to which proposals to change the 1983 Act were congruent with the European Convention on Human Rights.[66]

Others have analysed this issue more fully, what is of interest to us here is the great extent to which the individual diagnostic technologies (such as ASPD) contained within the DSM are the terms operationalized within such discourse.[67] In effect, by the close of the 20th century it became remarkably difficult—if not impossible—for UK legal discourse on mental health not to engage (at least in part) with US diagnostic technologies. In so doing, the DSM was embroiled within the very process of lawmaking—and as such its legitimacy was further amplified. Today, 'rights' and the DSM continue to relate with one another in complex ways within discourse on (inter)national public mental health: the deployment of diagnostic categories contained within the DSM and the use of psychopharmaceuticals co-produced with them are at once regarded as having the potential to compromise autonomy, whilst at the same time the right to be treated for mental health conditions is articulated in the same terms.

Let us return, though, to England and Wales, and the 1990s. As moves to reform the 1983 Act advanced, issues concerning the 'treatability' of personality disorder were placed in the foreground of the mental health landscape. This was specifically in relation to a drive by the Home Office and the Department of Health to push forward a controversial new policy for mentally disordered offenders. Part of this entailed the proposed removal of the so-called 'treatability test' from the existing Act. This 'test' was a clause restricting compulsory detention of individuals (including convicted offenders) within NHS facilities to only those individuals whose mental disorder was considered treatable. Individuals with personality disorders associated with antisocial behaviour (for example, ASPD and psychopathy) had long been held to be untreatable by many psychiatrists and psychologists; as such, under the Mental Health Act 1983, individuals living under

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[64] N Rose, 'Unreasonable Rights: Mental Illness and the Limits of Law' (1985) 12 *Journal of Law and Society* 199, 199.

[65] D Pilgrim, 'New "Mental Health" Legislation for England and Wales: Some Aspects of Consensus and Conflict' (2007) 36 *Journal of Social Policy* 79. See also: N Manning, 'Actor Networks, Policy Networks, and Personality Disorder' (2002) 24 *Sociology of Health & Illness* 644; D Pilgrim, 'Disordered Personalities and Disordered Concepts' (2001) 10 *Journal of Mental Health* 253; M Pickersgill, 'How Personality became Treatable: The Mutual Constitution of Clinical Knowledge and Mental Health Law' (in press) Social Studies of Science.

[66] For work on the work of European law in framing engagements with technologies, see Murphy and Ó Cuinn (n 5).

[67] eg G Norris, 'Offenders, Deviants or Patients? Human Rights and the Incarcerated Offender' in M Odello and S Cavandoli (eds), *Emerging Areas of Human Rights in the 21st Century: The Role of the Universal Declaration of Human Rights* (Routledge 2011).

the label of an untreatable personality disorder (but no other form of mental disorder or learning disability) who had committed a crime were more often detained within prisons than hospitals.

In the late 1990s, as part of the process of forming new mental health policy, the UK Government asked why mentally disordered offenders considered to be 'untreatable' could not, in future, be held within High Secure Hospitals. By removing the treatability test from the Mental Health Act, the government would be able legally to detain personality disordered offenders within hospitals—potentially, given further restrictions on the release of patients, such individuals could be detained indefinitely. In this way, some of the key policy questions regarding personality disorder had the potential to be resolved. However, mental health stakeholders of all kinds were incensed by these proposals, and, in large part as a consequence of their vigorous lobbying, the treatability test was modified rather than abandoned in the resulting 2007 Mental Health Act of England and Wales. To an extent, this was sold as an ethical imperative: individuals diagnosed with ASPD would no longer have their right to treatment compromised.

Associated with these legislative developments was a massive increase of public spending on and infrastructural development for personality disorder services and research from institutions like the Medical Research Council, the Department of Health, and the Home Office. By doing so, and, more generally, by bringing issues of treatability into the foreground, the government helped to create a new discursive space within which those clinicians who had long believed that personality disorders were treatable could articulate their views. Consequently, the voices of those professionals advocating treatment for conditions like ASPD increased in number and volume. Opinion gradually shifted: personality disorder started to become regarded as treatable. Implicitly, personality was thus shown to be plastic, mouldable through clinical intervention. Law, then, or more accurately the social and scientific developments animated by it, profoundly shaped understandings of the concept of ASPD—a concept introduced by an innovative psychiatric technology aimed at identifying it in individuals—just as ASPD itself impacted on the development of mental health law.

2. Ontology and Treatment

Some of the aforementioned funds earmarked for research into personality disorder were invested in neuroscientific studies on ASPD and psychopathy. Although the body of neurologic research into these conditions is slimmer than that of other areas (for example, epidemiological and psychotherapeutic investigations), models of personality disorder that imply a neurobiological aetiology are increasingly prominent and apparent in, for instance, Department of Health guidelines.[68] Neuroscience researchers are occupying positions of influence within clinical and policy arenas, and from them advocating ever greater shifts to integrate neurobiology with personality disorder research and practice.[69] Such calls are occurring as part of a wider move within psychiatry to reformulate psychopathological taxonomy along neurobiological lines.[70]

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[68] National Institute for Mental Health in England (NIMHE), *Personality Disorder, no longer a diagnosis of exclusion* (2003) <www.dh.gov.uk/en/Publicationsandstatistics/Publications/Publications PolicyAndGuidance/DH_4009546>.

[69] eg R Hare, 'Forty Years aren't Enough: Recollections, Prognostications, and Random Musings' in H Herves and JC Yuille (eds), *The Psychopath: Theory, Research, and Practice* (Lawrence Erlbaum Associates 2007).

[70] eg SE Hyman, 'Can Neuroscience be Integrated into the DSM-V?' (2007) 8 *Nature Reviews Neuroscience* 725.

Yet, ASPD is by no means a thoroughly 'neurologised' concept. Neuroscientists investigating ASPD and other personality disorders, such as psychopathy, frame these conditions as complex and opaque. They are considered to develop through the interrelations of adverse genetic and environmental conditions, which condense into specific dysfunctions within the brain. Thus, the brain at once mediates the network of heterogeneous entities that interact to produce personality disorder, whilst also acting as a key node within that network, evidencing its effects through cerebral structure and function. Significantly, as a consequence of this multimodality, some neuroscientists assert that psychotherapy is potentially more efficacious than psychopharmacology in the management of personality disorder.[71] It is clear, then, that ASPD and psychopathy are painted as biopsychosocial conditions even by specialists in their somatic aspects.

The 'traditional' construal of personality disorders as complex, multi-faceted conditions thus persists; ASPD continues to be framed in diverse biological, psychological, and environmental terms, with individual professionals placing a different emphasis on each of these 'components'. Accordingly, whilst we might conclude that there has been (at least implicit) agreement internationally that ASPD is a 'biopsychosocial' disorder, there has been no firm consensus on the specific contributions of each of these factors, or on the exact mechanisms of development.

In terms of the aetiology of and treatment options for personality disorder, the views of today's clinicians resonate with those of many scientists. However, whilst neuroscience is deemed to hold therapeutic promise, it is not currently thought clinical useful. The claims of neuroscience may even be ignored if health professionals consider them antagonistic to clinical aims. Accordingly, neuroscience has not, through the generation of incontestable and objective knowledge, contracted the body of narratives available to clinicians to describe the development of ASPD. Instead, it has expanded it: neuroscience complicates further the ontology of ASPD by providing new ways through which the disorder can be articulated, and, as a contested area of research, creates a focal point around which such discourses can revolve.

This has implications for the governance of individuals meeting the criteria for disorders of sociality: if ASPD is an opaque condition characterized by uncertainty then a 'medical model' for severe antisocial behaviour is more easily challenged, underscoring the importance of the questions raised earlier regarding where, exactly, criminals who meet the criteria for ASPD should be ensconced and who has the legitimate right to hold them there—the health or the criminal justice system? And what about therapeutic innovation: how should mental health researchers proceed to develop appropriate therapies for a disorder when they are not sure what causes it?

However, when we examine this second problematic more closely we can see that it is not as intractable as we might initially conclude. Just as the law has long made allowances for the fact that forensic mental health patients tend to transgress the boundaries of both juridical and medical realms, so too have psychiatry and psychology traditionally proceeded very well in treating disorders that have uncertain aetiologies. For ASPD, and personality disorder more broadly, a lack of clear causal mechanism (and an ongoing uncertainty regarding whether the category can even be considered a discreet and legitimate 'disorder') has, in some ways, impeded therapeutic progress; for instance, there are no drugs specifically indicated for the treatment of ASPD, and given its complex ontological status it is perhaps unlikely that any pharmaceuticals will emerge. Indeed, in the United Kingdom, the National Institute for Health and Clinical

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[71] Pickersgill (n 59).

Excellence (NICE) is remarkably clear about what it thinks about the role of drugs in managing ASPD, stating: 'Pharmacological interventions should not be routinely used for the treatment of antisocial personality disorder or associated behaviours of aggression, anger and impulsivity.'[72]

In practice, psychiatrists and psychologists go about treating ASPD in different ways, according to the ontological imaginaries they use to understand the disorder. Furthermore, as a consequence of the complex legal situation that emerged following the 2007 Mental Health Act of England and Wales, mental health practitioners were impelled to innovate. Accordingly, a range of therapies became widely regarded as (relatively) effective in treating personality disorder. Today, the kinds of treatments employed by clinicians working with those diagnosed with ASPD or other personality disorders are commonly psychotherapeutic techniques such as Dialectical Behaviour Therapy (DBT), often coincident with drug therapies to 'enable' the success of the psychotherapy through treating co-morbid disorders with which ASPD is often associated (for example, depression).

Such treatment programmes are commonly imagined and implemented within specially protected units (so-called Dangerous and Severe Personality Disorder, or DSPD, Units) within already high-secure facilities such as Broadmoor and Rampton Hospitals. A consequence of the political will to govern more effectively personality disorder that was so powerful in the early years of this century, these ambiguous institutions intersect the health and criminal justice systems. In so doing, they exemplify the long-standing tensions between policy and practice regarding whether ASPD is a psychiatric condition or a particularly acute form of 'normal' social deviancy. By acting as innovative 'treatment' centres for personality disorder, the DSPD Units have the potential to dissolve some of these tensions, and more firmly situate ASPD and similar conditions within a medical rubric. More profoundly, in trialling new ways of managing individuals with personality disorder, DSPD Units experiment with new ways of framing these conditions. In effect, they are what might be called 'laboratories of ontology', reconstituting what it is to have a disordered personality by shaping ideas about what these conditions are and how they might be acted upon.

More recently, the kinds of authoritative knowledge that health technologies such as ASPD specifically and the DSM in general enable biomedical investigators to produce have led to new speculation about their further potential uses in the innovation of law and policy. Some scientists have argued, for instance, that 'neuroimaging data could possibly inform questions of culpability, likelihood of future offense [sic] and prospects for rehabilitation'.[73] In response, members of the legal community have raised concerns that neurobiological research on antisociality and violence may 'be utilized to "prove" poor parenting' and 'to "predict" future criminality', with obvious ethical

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[72] National Institute for Health and Clinical Excellence (NICE), *Antisocial Personality Disorder: Treatment, Management and Prevention, NICE Clinical Guideline 77* (2009), 28. Available at <www .nice.org.uk/nicemedia/pdf/CG77NICEGuideline.pdf>. The National Institute for Health and Clinical Excellence provides independent advice and recommendations to the National Health Service for England and Wales regarding drugs, devices, and other forms of interventions for a range of medical and public health issues; see R Steinbrook, 'Saying no isn't NICE—The Travails of Britain's National Institute for Health and Clinical Excellence' (2008) 359 *New England Journal of Medicine* 1977. NICE has no formal jurisdiction in Northern Ireland and Scotland, though its advice is commonly taken up in those countries.

[73] M Koenigs, A Basin-Sommers, J Zeier, and JP Newman, 'Investigating the Neural Correlates of Psychopathy' (2011) 16 *Molecular Psychiatry* 792, 792.

implications regarding the rights of already marginalized individuals.[74] As technologies such as the DSM and other standards such as the Psychopathy Checklist stimulate further innovative biomedical research, then, speculation continues about the ways in which the law itself and other institutions may change in order to regulate more effectively the care and treatment of the mentally ill. At the same time, debates about the legitimacy of these possible shifts play out—potentially looping back and impacting upon the social and technical actants in the networks through which they might occur. In effect, new health technologies thus do not simply stimulate new research which may intersect with legal matters: they play a role in shaping wider forms of social and technical developments that relate to each other in multiple and multi-layered ways. Law and regulation, technology and innovation, and mental health and subjectivity continue to complicate one another.

E. Conclusion

In this chapter I have interrogated the ways in which, in an era of costly, high-tech biomedical apparatuses and treatments, a simple book has acted—and continues to act—as an innovative health technology: one that radically recalibrated not only the mental health professions but contributed to the reshaping of law, science, and everyday life on an international scale. In decentring the novel and refusing an understanding of 'innovation' based solely on the claims of prominent scientists, clinicians, and institutions, I have instead highlighted alternative forms of innovative biomedical tools and techniques that have far-reaching effects on practice and regulation, stimulate new forms of experimental, clinical, and social life, and reshape subjectivities in Europe and worldwide.

One function of both law and technology is to reduce complexity; to make life run more smoothly, so as to order the natural and the social and more effectively govern interactions at both macro and micro scales.[75] Yet, as we have seen here, it is precisely through the interaction between law and biomedical innovation (especially in the form of the humble clinical standard) that the complexities of mental health are multiplied. Whilst regulation is commonly seen as a barrier to innovation, in the case of the mental health law and practice we can see how in fact it is important to understand socio-legal discourses and institutions as drivers: they can and do impel radical change in treatment, profoundly recasting the ontologies of the subjects they seek to habilitate. In the process, new questions about the administration and treatment of those deemed mentally ill, and the use of diagnostic and therapeutic innovations in relation to this, must be asked. In the case of controversial categories such as antisocial personality disorder, these may prove difficult to answer in ways that prove durable, legitimate, and ethical.

Let us assume, just for a moment, that ASPD is an unproblematic mental disorder that does need to be treated. But what does this mean? In her analysis of the competing philosophies of nature that structure debate regarding endangered species, sociologist Thompson shows that 'that idea that a species should be "saved" is not nearly as transparent as it first appears'.[76] Rather, multiple questions lurk beneath the

[74] C Walsh, 'Youth Justice and Neuroscience: A Dual-Use Dilemma' (2011) 51 *British Journal of Criminology* 21, 21.
[75] A Barry, 'In the Middle of the Network' in Law and Mol (n 9).
[76] C Thompson, 'When Elephants Stand for Competing Philosophies of Nature: Amboseli National Park, Kenya' in Law and Mol (n 9).

surface regarding 'what the species is to be saved from, by whom it is to be saved, how and where it is to be saved, and how and by whom conservation gains and setbacks will subsequently assessed'.[77] What Thompson is indicating here is that normative impulses mask a range of uncertainties. In the case of mental health, when we decide that some personality trait or constellation of behaviours is a psychiatric disorder—let us call it ASPD—that needs to be treated, we must then ask: *how* should it be treated? *Who* should take responsibility for this and *where* should it be implemented? *How* should such treatments be funded? *Which* individuals are eligible for access—in other words, who has the right to be treated? Again, in forensic mental health these questions have important legal and ethical dimensions and are politically resonant.

This chapter has thus posed many questions, but has replied with few answers. Instead, these problems have been highlighted in order to give a sense of some of the complexities that are so characteristic of the multiple nexus points between law and regulation, biomedical innovation, and mental health. In aiming to articulate these problematics, I have necessarily engaged in my own form of 'pragmatic reductionism' in order to lend some kind of coherence to an essentially complicated situation.[78] As in science itself, such simplification of the relationship between the technoscientific and the socio-legal is necessary in order to render the world legible and comprehensible.[79] As we simplify the relationships constitutive of new health technologies in order better to grapple with the social, legal, and ethical problematics they present us with and regulate them accordingly, we must necessarily also reflexively engage one another with the ontological politics of such representations. In essence, what kinds of simplifications should we make? Which do we have the right to make? In so doing, what do we bring to the fore and relegate to the background, and what are the ethical implications of this ordering?[80] Representation and simplification have normative dimensions, shaping our intellectual and regulatory responses to the messages that are conveyed. As such, they demand our attention and reflection.

[77] Thompson (n 76).
[78] cf S Beck and J Niewöhner, 'Somatographic Investigations across Levels of Complexity' (2006) 1 *BioSocieties* 219, 223.
[79] See, eg SL Star, 'Simplification in Scientific Work: An Example from Neuroscience Research' (1983) 13 *Social Studies of Science* 205.
[80] Mol and Law (n 9).