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RESEARCH ARTICLE

'Visible' compulsions: OCD and the politics of science in British clinical psychology, 1948–1975

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Abstract

This article historicizes a single stage in how the contemporary obsessive–compulsive disorder (OCD) category was built. Starting from the position that the two central components which make up OCD are 'obsessions' and 'compulsions', it illustrates how these concepts were taken apart by a small group of clinical psychologists working at the Institute of Psychiatry and the Maudsley psychiatric hospital in south London in the early 1970s, and why compulsions were investigated whilst obsessions were ignored. The decision to distinguish the previously undifferentiated symptoms is attributed to the commitment amongst psychologists at the Maudsley, most notably Stanley Rachman, to an empirical conception of science which emphasized observability. Two aspects of this are discussed. First, compulsions were deemed 'visible' through their correspondence with animal behaviour. Second, the symptom was seen as open to an experimental modification procedure which privileged visible outcomes. Ultimately, the article concludes that the historical division between 'obsessions' and 'compulsions', and the extensive investigation of the latter, has had substantial implications for the development of OCD as a category centred on visible behaviours and treated through behavioural means.

Obsessive–compulsive disorder (OCD) is a significant mental health diagnosis in the twenty-first century. The World Health Organisation (WHO) lists OCD as one of the ten most 'disabling' illnesses of any kind in terms of loss of earning and reduced quality of life, and it is frequently cited as the fourth most common 'mental disorder' globally after depression, substance abuse and social phobia.[1] Contemporary definitions of OCD are constituted around two key concepts: obsessions and compulsions. Clinical guidelines in Britain define 'obsessions' as 'unwanted, intrusive thoughts and images that repeatedly enter a person's mind' – often violent or sexual in content – and 'compulsions' as 'repetitive behaviours that a person feels driven to perform' – such as checking a door is locked or repeated handwashing.[2] In order to receive a diagnosis of OCD an individual must present with obsessions and compulsions which are 'excessive, time consuming, distressing, and interfering with their lives'.[3] The category of OCD as made of up of these two

[1] David Veale and Alison Roberts, 'Obsessive compulsive disorder: a review', *British Medical Journal* (2014) 348, pp. 1–6, 1.

[2] National Institute for Health Care Excellence, 'Obsessive–compulsive disorder and body dysmorphic disorder: treatment,' *Clinical Guideline*, 2005, pp. 1–51, 15.

[3] National Institute for Health Care Excellence, op. cit. (2), p. 15.

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components – behavioural compulsions and mental obsessions – is consistent in diagnostic guidelines across the anglophone world.[4]

This article will demonstrate the first stage in how the current psychological category of OCD was built, and how its formation was contingent upon what counted as 'valid' scientific evidence amongst clinical psychologists working at the Institute of Psychiatry (IoP) and the Maudsley psychiatric hospital in south London in the early 1970s.[5] It will focus specifically on the work of Stanley Rachman, who was a clinical psychologist at the IoP, and who took a particular interest in obsessional phenomena. Starting from the position that the two central components which make up OCD are 'obsessions' (internal thoughts) and 'compulsions' (external behaviours), it will explain how Rachman and his colleagues took these concepts apart and why extensive experimental investigation occurred in order to build a stable concept of 'compulsions' as a form of pathological behaviour – predominately acts of handwashing. The decision to differentiate the previously ambiguous concepts of 'obsessional ruminations' (shortened to obsessions) and 'compulsive rituals' (compulsions) was due to the adherence amongst psychologists at the Maudsley to a positivist strand of experimental science which argued that 'valid' knowledge was that which was observable and visibly modifiable. Obsessional ruminations – which were deemed to have no visible referent – were considered beyond the realm of verifiable, and thus of 'scientific' ways of knowing. The initial division between obsessions and compulsions has had long-term implications for the development of OCD as a category centred on the presence of observable behaviours and treated through behavioural interventions.

Despite the prevalence of OCD as a significant mental health diagnosis, a comprehensive historical analysis of the category has yet to be undertaken. Scholars who have explored the concept through a historical lens have overwhelmingly projected the present conception of OCD into the past and thus rendered it both stable and timeless. This is particularly evident in German Berrios's 'conceptual' history of obsessive–compulsive disorder, in which the psychiatrist makes statements such as 'after the 1850s, OCD was redefined within a new category, "folie avec conscience" (insanity with insight)' – as if these two *different* concepts represent the *same* underlying thing (namely, contemporary OCD).[6] A similarly retrospective approach is adopted by the disability scholar Lennard Davies in *Obsession: A History*, where the definition of 'obsession' – 'a focused activity, an ideè fixee, or simply a preoccupation' – is located in such varied places as contemporary OCD and nineteenth-century 'monomania', and as part of the marketing strategy for the Calvin Klein perfume – 'Obsession'.[7] Davies's study, foregrounded as a 'biocultural approach' to obsessions, moves from period to period without reflection on the processes of transformation taking place.[8] As Chris Millard has usefully stated, 'blanket terms like "social" and "cultural" do not really clarify what is happening when new behaviours come to prominence'.[9] In fact, such an analysis gives a transhistorical validity to a single definition of 'obsession' which is located across different historical and cultural spaces. The works of Berrios and Davies are, in an important sense, ahistorical: in interweaving

[4] The American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders*, 5th edn, 2013; World Health Organisation, *International Classification of Diseases* (*ICD*), 11th edn, 2019.

[5] For more information on the history of the Maudsley hospital see Katherine Angel, Edgar Jones and Michael Neve, 'European psychiatry on the eve of war: Aubrey Lewis, the Maudsley Hospital, and the Rockefeller Foundation in the 1930s', *Medical History Supplement* (2003) 22.

[6] G.E. Berrios, 'Obsessive–compulsive disorder: its conceptual history in France during the 19th century', *Comprehensive Psychiatry* (1989) 30(4), p. 289.

[7] Lennard J. Davies, *Obsession: A History*, Chicago: The University of Chicago Press, 2018, p. 10.

[8] Davies, op. cit. (7), pp. 12–13.

[9] Chris Millard and Dennis Ougrin, 'Narrative matters: self-harm in Britain post-1945: the evolution of new diagnostic category', *Child and Adolescent Mental Health* (2017) 22(3), pp. 175–6.

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contemporary OCD into the past, the scholars neglect to shed light on why – and in what context – the modern concepts of 'obsession' and 'compulsion' emerged (and converged), and how they became stable objects of psychological enquiry. Put simply by Adrian Wilson, 'responses to diseases are permitted to vary historically; but this historiographic permission is withheld from *diseases themselves*'.[10]

Over the last decade there has been a substantial increase in qualitative approaches to the study of OCD, particularly in the fields of linguistic and cultural studies.[11] Within this body of work, scholars have identified the important historical shift from the psychoanalytic 'obsessional neuroses' to the psychological category of OCD as it appeared in the third edition of the *American Diagnostic and Statistical Manual* in 1980.[12] David Healey, for example, has explained how psychoanalytic interpretations gave way to the modern OCD concept in response to the marketing of Clomipramine in America – an argument which reflects the analysis that several historians have made to explain the emergence, and growth, of novel psychiatric conditions.[13] Healey's notion that OCD emerged from psychopharmaceutical research, however, is misleading. This is especially so in the UK, where the category was constituted through the profession of clinical psychology and the first line-treatment for OCD since 1980 has been psychological rather than drug-oriented. In fact, the marketing of Clomipramine rereferred to by Healey relied on the conception of OCD developed at the Maudsley.[14] In response to existing literature, the following work will produce novel insights into the conceptual architecture underpinning contemporary OCD. It will emphasize that the differentiation of, and relationship between, 'obsessions' and 'compulsions' was not the result of a new pharmaceutical intervention, but emerged from the application of a set of distinct experimental practices which formed the basis of a new clinical psychology in Britain.

In centring the conceptual development of OCD in relation to historically situated psychological practice, this article will also build upon two areas in the history of clinical psychology. The first is how a language derived from early twentieth-century behaviourism has been used to underpin a particular model of human 'disorder' – and the consequences of this. Kurt Danziger's genealogical approach to the concepts of 'behaviour' and 'learning' are vital in contextualizing the historical links between behavioural ideas and empirical ways of thinking.[15] He also draws attention to the way in which behavioural psychologists merged theory and practice, the latter confining the conceptual possibilities of the former. What is absent from his work, and from histories of behaviourism more broadly, is the function of these terms in relation to a specific diagnostic category.

The second area relates to the historiography of clinical psychology in Britain. A number of historians have traced the development of a distinct form of British clinical psychology to the establishment of the Institute of Psychiatry (IoP) as a research and teaching

[10] Adrian Wilson, 'On the history of disease concepts: the case of pleurisy', History of Science (2000) 38, pp. 251–362, 273.

[11] See M. Boyd and D. Fennell, 'Obsessive–compulsive disorder in the media', *Deviant Behaviour* (2014) 35(9); P. Friedrich, *The Literary and Linguistic Construction of Obsessive-Compulsive Disorder: No Ordinary Doubt*, Palgrave McMillan, 2015.

[12] For example, P.H. Castel, 'A new history of ourselves, in the shadow of our obsessions and compulsions', *Philosophy, Psychiatry, and Psychology* (2014) 21(4).

[13] David Healey, *The Anti-depressant Era*, Cambridge, MA: Harvard University Press, 1997.

[14] Healey references the diagnostic and statistical manual, which uses the OCD category developed by Rachman *et al.* The American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders*, 3rd edn, 1980.

[15] Kurt Danziger, *Naming the Mind: How Psychology Found its Language*, New York Press, 1997, pp. 85–179.

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adjunct to the Maudsley hospital in 1948.[16] Prior to this period, psychology in Britain had little institutional overlap with psychiatry, and work with adult psychiatric patients was virtually unknown.[17] However, this all changed when, in a desire to bolster the scientific grounding of his profession, the psychiatrist and head of the new IoP, Aubrey Lewis, invited the psychologist Hans Eysenck to map out a psychology department at the institute and train a new type of specialist: the 'clinical psychologist'.[18] Sarah Marks and Maarten Derksen have respectively illustrated how the institutional arrangements and professional rivalries at the IoP enabled psychologists to move from working initially as technical assistants to psychiatrists (with limited access to patients) to practitioners administering behavioural interventions.[19] They argue that, under the direction of Eysenck, new Maudsley psychologists drew on the 'laboratory practices' of empiricism to advance behavioural approaches and position themselves as uniquely contributing to the mental health setting. The way in which the principles of this research – experimental, observable and verifiable – constituted the key components of a novel psychological category, however, has yet to be considered. The present article thus situates the development of OCD as rooted in the specific scientific practices operating within this unique institutional space.

To recap, the following work will trace the first stage in the conceptual formation of OCD in the early 1970s. It will outline how Rachman and his colleagues at the Maudsley demarcated the previously undifferentiated concepts of 'obsessional ruminations' and 'compulsive rituals' and extensively investigated the latter. This built up a model of 'compulsions' as visible pathological behaviours, whilst ruminations were placed outside the realm of empirical psychological enquiry. There were two strands underlying this process: the first was the use of models derived from animal experimentation and rooted in behaviourist psychology, and the second was the application of an 'experimental method' – defined through observation and verification – to the clinical setting. These strands, which adhered to a particular conception of psychological 'science', had significant implications for the differentiation between, and constitution of, 'obsessions' and 'compulsions', and their eventual conjoining as OCD. The decision made in the early 1970s to emphasize 'visible' behaviours and exclude ruminations was fundamental in shaping subsequent conceptions of the category.

The following argument relies predominately on a close reading of a series of psychological studies published between 1970 and 1975. These publications have an impressive internal coherence: they outline psychological experiments conducted in a single institution (the department of psychology at the IoP), they are all authored (or co-authored) by Rachman, and they were all published in *Behaviour Research and Therapy* (*BRAT*) – a journal established in 1963 by Eysenck, and of which Rachman was the long-term editor. In fact, as Roderick Buchanan has argued, the *BRAT* journal was part of a conscious effort by Eysenck to advance clinical psychology as a unique and viable profession through the extensive publication of behavioural-therapy research.[20] The unity of these publications

[16] Maarten Derksen, 'Clinical psychology and the psychological clinic: the early years of clinical psychology at the Maudsley', *History and Philosophy of Psychology* (2000) 2(1); Sarah Marks, 'Cognitive behaviour therapies in Britain: the historical context and present situation', in W. Dryden (ed.) *Cognitive Behaviour Therapies*, London: SAGE Publications Ltd, 2012; Marks, 'Psychologists as therapists: the development of behavioural traditions in clinical psychology', in J. Hall, S. Pilgrim and G. Turpin, *Clinical Psychology in Britain: Historical Perspectives*, Leicester: British Psychological Society, 2015. Roderick Buchanan, *Playing with Fire: The Controversial History of Hans J. Eysenck*, Oxford: Oxford University Press, 2010.

[17] Buchanan, op. cit. (16), p. 184.

[18] Buchanan, op. cit. (16), p. 182.

[19] Derksen, op. cit. (16); Marks, opera cit. (16).

[20] Buchanan, op. cit. (16), p. 215.

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in terms of their authorship, location and continued self-referencing enabled a coherent concept of 'compulsions' to emerge.

I am aware of not being able to access the heterogeneous space of the clinic where the experimental studies took place, and in which the nuanced interactions between patients and practitioners will undoubtedly have shaped the psychological knowledge produced. However, analysing published material gives an important sense of how these psychologists wanted their ideas to be presented and the processes of exclusion and emphasis in psychological knowledge formation. The articles used here – and the intellectual decisions they contain – were absolutely central to the emergence of OCD as a psychological concept centred on visible behaviours. The fact that these publications continue to be referenced in contemporary clinical literature on OCD is a testament to their centrality in establishing the conceptual components of the category.

From 'neuroses' to 'compulsions'

It is not the case that discussions of 'obsessions' and 'compulsions' emerged in the 1970s out of a vacuum. The terms have a complex history and are found, for example, in Sigmund Freud's category of *Zwangsneurose* – which was translated in Britain as 'obsessional neurosis' and in America as 'compulsion neurosis'.[21] However, the partitioning of 'obsessions' and 'compulsions' as two distinct concepts, differentiated and placed in a binary of visible behaviour and invisible thoughts, was historically new and conceptually different from earlier packaging of these terms. In Freud's writings, *Zwang* referred to persistent ideas that emerged from intrapsychic conflict: a tension between unresolved childhood wishes (those of love and hate) and the the critical self (ego) were substituted with the pathological symptoms of obsessional thinking.[22] Freud's category was adopted and modified in Britain during the interwar years as part of a broader introduction of psychoanalytic concepts in discussions around 'shell shock', and 'obsessional neurosis' became a staple – although inconsistently defined – diagnosis in British psychiatric textbooks of the period.[23]

In broader psychiatric discussions of 'obsessional neurosis' in Britain from the 1930s, the terms 'obsession' and 'compulsion' were not clearly demarcated and were frequently used interchangeably, and their application depended on the practitioner in question. The complexity around their meaning is demonstrated in the writings of Maudsley-based psychiatrist, and subsequent head of the IoP, Aubrey Lewis, who in 1935 referred to 'obsessional illnesses' as made up of 'compulsive obsessions', 'obsessional impulses' and 'compulsive inner speech'.[24] In the framework outlined by Lewis, 'obsession' referred to persistent and unwanted ideas and/or impulses (urges to act) whilst 'compulsion' denoted the accompanying affect: a subjective 'desire to resist'.[25] In discussions amongst clinical psychologists more immediately prior to the 1970s, 'obsession' and 'compulsion' again took a different form – demonstrating how their messy use was not confined to a single approach. In 1969, a behavioural psychologist whose ideas were adopted by psychologists working at the Maudsley referred to 'obsessional neurosis' as made up of three

[21] Sigmund Freud, 'Two case histories: Little Hans and The Rat Man' (1909), in *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, vol. 10 (ed. J. Strachey), London: Hogarth Press, 1955.

[22] Freud, op. cit. (21), p. 160.

[23] The changes from Freudian conceptions of obsessional neurosis in British psychiatry rested primarily on a misinterpretation of the term 'instinct'. There was also a centralization of fear/anxiety rather than guilt and self-reproach. See Eva Surawy Stepney, 'From psychoanalysis to psychosurgery: shifting discourses on obsessional thoughts in British psychiatry, c. 1920s–1960s', unpublished master's dissertation, 2019, pp. 1–37, 25.

[24] Aubrey Lewis, 'Problems of obsessional illness', *Proceedings of the Royal Society of Medicine* (1935) 29, pp. 13–24.

[25] Lewis, op. cit. (24), p. 13.

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'obsessional behaviours': 'impulses to do things' (such as kill, confess, attack or steal), 'compulsions' (which are the 'cases of those impulses acted upon') and 'elaborate and sometimes incredibly time consuming rituals such as eating, dressing, and sexual performance'.[26] Examples of 'compulsions' included exhibitionism, gambling, 'pleasurable' masturbation and the incessant plucking of one's eyebrows – symptoms which differed substantially from those contained in the differentiated concepts of 'obsessional ruminations' and 'compulsive rituals' that emerged throughout the 1970s.

The demarcation of 'obsessions' and 'compulsions' – and their constitution as two distinct but related concepts – took place under the direction of Stanley (Jack) Rachman, a South African psychologist who joined the IoP in 1959 to conduct research under Eysenck, and became head of the clinical section in 1974.[27] In a series of experimental studies published between 1970 and 1975, Rachman and his colleagues – the clinical psychologist John Marzilier, the psychological researcher Ray Hodgson and the psychiatrist Isaac Marks – established a clear division between the symptoms of 'obsessional ruminations' and 'compulsive rituals' in psychiatric inpatients diagnosed with the psychoanalytic category 'obsessional neurosis.'[28] The division between these components was established, and strengthened, through carrying out a number of consecutive experimental investigations on individuals who exhibited 'overt compulsive rituals' and the active exclusion of patients described as 'obsessional ruminators'.[29] In an experimental investigation of ten cases of 'chronic obsessive neurosis' in 1972, for example, Rachman, Hodgson and Marks reported that 'compulsions had to be present for entry into the trial and patients complaining of ruminations were excluded' – a statement reiterated in subsequent texts.[30] As a consequence of this differentiation and exclusion, a model of 'compulsive rituals' as visible and repetitive behaviours emerged, whilst 'ruminations' were placed firmly outside the realm of psychological enquiry.

In a single-authored publication in 1971, Rachman gives us a sense of the rationale for the demarcation of compulsive rituals and obsessional ruminations, and the exclusion of the latter from his departmental research programme. From a 'reasonable amount of unsystematised information', derived from existing literature and working in the clinical environment, the psychologist defined obsessional ruminations as a 'pathological phenomenon' consisting of 'repetitive and unacceptable thoughts that are distasteful, shameful or abhorrent'.[31] In light of this description, he commented that 'obsessional ruminators raise special problems for the behavioural psychologist because of their subjective, private nature'. Rachman went on to explain that repetitive thoughts are 'not visible, are unpredictable, and also provide a stark reminder to the limits one can press

[26] Ralph Metzner, 'Some experimental analogues of obsession', *Behaviour Research and Therapy* (1950) 1, pp.231–6, 231. Repeated in Hans Eysenck and Stanley Rachman, *The Causes and Cures of Neurosis: An Introduction to Modern Behaviour Therapy*, London: Routledge, 1965, p. 131.

[27] Buchanan, op. cit. (16), p. 26.

[28] Ray Hodgson, John Marzilier and Stanley Rachman, 'Treatment of obsessive–compulsive neurosis by modelling', *Behaviour Research and Therapy* (1970) 8, pp. 385–92; Ray Hodgson, Isaac Marks and Stanley Rachman, 'The treatment of chronic obsessive–compulsive neurosis', *Behaviour Research and Therapy* (1971) 9(3), pp. 237–47; Ray Hodgson and Stanley Rachman, 'The effects of contamination and washing in obsessional patients', *Behaviour Research and Therapy* (1971) 10, pp. 111–17; Ray Hodgson, Isaac Marks and Stanley Rachman, 'The treatment of chronic obsessive–compulsive neurosis: follow up and further findings', *Behaviour Research and Therapy* (1972) 10(2), pp. 181–9; Ray Hodgson, Stanley Rachman and Isaac Marks, 'The treatment of obsessive–compulsive neurotics by modelling and flooding in vivo', *Behaviour Research and Therapy* (1973) 11(4), pp. 463–71; Ray Hodgson, Stanley Rachman and Isaac Marks, 'Treatment of chronic obsessive–compulsive neurosis by in-vivo exposure: a two year follow up', *British Journal of Psychiatry* (1975) 127, pp. 349–64.

[29] Stanley Rachman, 'Obsessional ruminations', *Behaviour Research and Therapy* (1970), 9(3), pp. 229–35, 231.

[30] Hodgson, Marks and Rachman, op. cit. (8), p. 237.

[31] Rachman, op. cit. (29), p. 229.

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animal analogies'.[32] The subjective and elusive quality of ruminations was presented in firm contrast with 'the other main feature of obsessional neurosis, compulsive behaviour'.[33] Compulsions 'can be approached with greater ease'; they are 'visible', and have a 'predictable quality' and 'many reproducible analogies in animal research'.

It is important to emphasize that the 'visibility' of a concept termed 'compulsive behaviour' – and the private nature of ruminations – was not an inevitable distinction, but the result of an understanding of psychological science which emphasized observability. Through their perceived external nature, compulsions were deemed open to both cross-species comparison and experimental modification. The decision to differentiate the previously ambiguously related concepts of 'obsessions' and 'compulsions' and extensively investigate the latter led to an emphasis on behaviours in the formation of OCD, whilst 'subjective' thoughts were subordinated as of secondary importance.

Of the visible and the clinical

The differentiation between obsessions and compulsions on the basis of visibility can only be adequately understood with reference to the broader context of clinical psychology as it evolved at the IoP in the decades following the Second World War. The emergence of clinical psychology as a new profession at the IoP in 1948, and the early battles to secure its status, have been well documented by historians.[34] As Buchanan has outlined, in an attempt to carve out the contribution of the new profession to post-war mental health services, Eysenck spent much of the 1950s and 1960s engaging in a public demarcation of clinical psychology from both psychoanalysis and medical psychiatry on the basis of scientific princples.[35] In contrast to existing mental health professions, which centred on 'flawed' descriptive case studies, the head of the Maudsley psychology department insisted that his clinical psychologists were 'laboratory scientists' who applied the 'scientific method' directly to the clinical setting.[36] Reflecting, but not explicitly referencing, a loose blend of twentieth-century logical empiricism, and the operational methodology of US behaviourists, Eysenck's 'scientific method' centred on visibility: what counted as valid scientific knowledge was that which had an observable referent and could be verified (or falsified) through experimental means.[37] In other words, any theoretical terms 'for which there were no corresponding observational consequences were considered meaningless'.[38] Eysenck's empirical conception of science – and its application to the clinic – manifested in two ways: psychologists working at the Maudsley adopted a model of fear rooted in animal behaviour, and transformed it into a novel approach to treatment based on repeated, experimental testing.

In his desire to bring 'science' into the clinic, Eysenck advocated for a theory of neurotic anxiety that had its 'origin in laboratory experimentation'.[39] Fortunately, such an approach could be found in the learning theory of early to mid-twentieth-century neobehaviourist psychologists, such as Orval Mowrer and Clark Hull, whom Eysenck viewed as

[32] Rachman, op. cit. (29), p. 229.
[33] Rachman, op. cit. (29), p. 229.
[34] Derksen, op. cit. (16); Buchanan, op. cit. (16); Marks, op. cit. (16).
[35] Buchanan, op. cit. (16), p. 225.
[36] Buchanan, op. cit. (16).
[37] The focus on observability is rooted in long-standing debates around the nature of 'science'. See Lorraine Daston and Peter Galison, *Objectivity*, Princeton, NJ: Princeton University Press, 2007; Lorraine Daston and Elizabeth Lunbeck, *Histories of Scientific Observation*, Chicago: The University of Chicago Press, 2011.
[38] Mary S. Morgan and Margaret Morrison (eds.), *Models as Mediators: Perspectives on Natural and Social Science*, Cambridge: Cambridge University Press, 1999, p. 2.
[39] Buchanan, op. cit. (16), p. 225.

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sharing his scientific outlook.[40] The foundational principle of these researchers was that the behaviour of all organisms was learnt through an interaction with the environment, and that either reward or punishment associated a particular event or object (stimulus) with a corresponding behaviour (response).[41] Importantly, Hull and Mowrer conceptualized anxiety in stimulus–response terms, with the added component of motivation. In *Principles of Behaviour* (1943) Hull wrote that 'anxiety is a learnt response, occurring to "signals" that in the past ... have been followed by situations of injury or pain (unconditioned stimuli)'.[42] Based on a series of experiments involving administering electric shocks to rats, he proposed that anxiety served a 'useful function of motivating and reinforcing behaviour that tends to avoid or prevent the recurrence of pain'.[43] Anxiety was thus a 'motivational and reinforcing agent' which, akin to hunger and sex, acted to associate a stimulus with a particular behavioural response.[44] It could be either adaptive and involuntary, such as fear in response to pain, or 'maladaptive' and voluntary, such as ongoing and repeated avoidance. Whilst Hull had predominately worked with rats in laboratory settings, and focused on elucidating the general mechanisms of learning, psychologists at the Maudsley applied this stimulus–response model of anxiety (conditioned fear) to the treatment of psychiatric inpatients. In 1960 Eysenck wrote that all neurotic symptoms (those driven by fear) are 'learned patterns of behaviour which are maladaptive'.[45] In light of this, he maintained that the treatment efforts of psychologists should focus 'on the extinction of the unadaptive conditioned responses' – i.e. on eradicating 'neurotic' behaviour.[46] The learning framework represented a radical departure from early twentieth-century conceptions of neurotic anxiety, which were understood either as an ingrained evolutionary 'instinct' (in psychiatry and early psychology) or as the result of repressed psychic trauma (in psychoanalysis).[47]

Due to its origin in laboratory experimentation, the stimulus–response model of anxiety was understood as open to 'objective' investigation. It gave rise to a series of cause-and-effect problems which could be studied experimentally[48] – for example, which stimulus produced which behavioural response, under which environmental conditions. Such an approach was presented as a contrast to psychoanalysis which, in his sustained public critique, Eysenck maintained was 'outside the realm of science'.[49] He wrote that 'what the Freudian model lacks above all, is an objectively testable *modus operandi* which can be experimentally studied in the laboratory, which can be precisely quantified, and which can then be subjected to the formulation of strict scientific laws'.[50] The psychologist went on to profess that psychoanalysis 'had no empirical or rational foundation' because psychoanalysts 'reason theoretically, without demonstrating experimentally, and errors are the result'.[51] It was theoretically unreliable because it rested on principles,

[40] Hans J. Eysenck., *Behaviour Therapy and the Neuroses*, Oxford: Oxford University Press, 1960, p. 5.

[41] Outlined in O.H Mowrer, 'A stimulus–response analysis of anxiety and its role as a reinforcing agent', *Psychological Review* (1939) 46(6); Clark Hull, *Principles of Behaviour*, New York: Appleton-Century Crofts Inc., 1943. The work of neobehaviourists was, of course, rooted in the early twentieth-century operant behaviourism (B.F. Skinner) as well as Ivan Pavlov's theories of conditioning.

[42] Hull, op. cit. (41), p. 48.

[43] Hull, op. cit. (41), p. 48.

[44] Hull, op. cit. (41).

[45] Eysenck, op. cit. (40), p. 5.

[46] Eysenck, op. cit. (40).

[47] In late nineteenth-century psychology, 'an anxiety reaction was regarded as phylogenetically fixed and unlearned'. William James, *Principles of Psychology*, vol. 2, New York: Henry Holt and Company, 1918, p. 704.

[48] Eysenck, op. cit. (40), p. 4.

[49] Eysenck, op. cit. (40).

[50] Eysenck, op. cit. (40), p. 16.

[51] Eysenck, op. cit. (40), p. 4.

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such as the 'unconscious', which had no visible referent, and it was 'ineffective' because it was not possible to guarantee the connection between cause (therapy) and effect (recovery) in every case.[52] In its reliance on descriptive case studies, Eysenck thought, psychiatry also lacked an empirical basis. As one of the first Maudsley psychologists wrote, it is 'easy to accept their [psychiatrists'] theories of abnormal behaviour if they have not been tested, but when these explanations are formulated as a "problem" to the experimenter, one finds many explanations are not explanations at all because nothing [visible] follows from them'.[53] Instead, Eysenck and his early allies were concerned that clinical accounts produce a demonstrable account of human disorder. They stressed that clinical psychologists should focus on observable behavioural acts and reject 'mental processes' which could not be subject to external systems of verification. Interventions derived from behavioural learning theory, Eysenck argued, could be tested – and refined – in the clinical setting until they reached the threshold of 'scientific' (observable) evidence.

Drawing on Eysenck's vision, throughout the 1950s and 1960s the first Maudsley psychologists developed novel interventions for the 'functional neuroses' through an emphasis on overt behavioural symptoms and their 'modification'.[54] Rachman, in particular, keenly shared Eysenck's 'laboratory-to-clinic' vision and has been described as 'Eysenck's right-hand man in the clinic – a productive researchers and skilled practitioner'.[55] Unlike his former supervisor, however, Rachman spent the majority of his time in the clinical setting and was thus able to manifest what Eysenck never did himself – applying these scientific principles to psychiatric inpatients.[56] The 'visible' and 'predictable' quality of compulsive rituals, and the inaccessibility of ruminations, were due to their fit within the two existing frameworks underpinning the ethos of Maudsley clinical psychology since the 1950s: pathological symptoms as learnt 'maladaptive' behaviours and the novel application of behavioural models to the clinical setting (i.e. to patients). Both of these frameworks were rooted in an empirical conception of science which emphasized observability and external verification. The integration of a theory of learning derived from laboratory animals, and a 'scientific' practice which maintained that knowledge is valid if it can be made testable, rendered 'compulsive rituals' visible. Compulsions could be observed in animal behaviour and could be visibly modified in experimental settings.

Animal models: 'anxiety-reducing' behaviours

The entirety of the studies on 'compulsive rituals' conducted by Rachman and his colleagues were underpinned by, and consistently referenced, a selection of experimental analogues of 'stereotyped' and 'fixed' behaviour in animals.[57] The use of animal experiments in making 'compulsive behaviour' visible is perhaps unsurprising in the context of

[52] Eysenck, op. cit. (40).

[53] Robert Payne, 'Experimental method in clinical psychological practice', *Journal of Mental Science* (1957) 103, pp. 189–96, 191. Eysenck was not the only one advocating for psychologists to bring science into the clinic. Monte Shapiro, the head of the clinical section, also promoted experimentation as foundational to evidence and joined Eysenck in the assault on medical psychiatry. Shapiro was not a fan of behaviour therapy, believing that it failed to meet standards of evidence. Instead, he favoured the hypothetico-deductive method, which ended up being too time-consuming.

[54] H. Gwynne-Jones, 'The application of conditioning and learning techniques to the treatment of a psychiatric patient', *Journal of Abnormal and Social Psychology* (1956) 52(3); Aubrey Yates, 'The application of learning theory to the treatment of tics', *Journal of Abnormal Society Psychology* (1958) 56(2); Victor Meyer, 'Case report: the treatment of two phobic patients on the basis of learning principles', *Journal of Abnormal and Social Psychology* (1957) 55(2).

[55] Buchanan, op. cit. (16), p. 26.

[56] Buchanan, op. cit. (16).

[57] Also Richard Solomon, 'Traumatic avoidance learning: acquisition in normal dogs', *Psychological Monographs: General and Applied* (1953) 67(4).

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behaviourism – a tradition which has been shown to have its roots in early twentieth-century biology and comparative psychology.[58] However, the implications of this practice are significant. The translation of models derived from animal behaviour to human 'disorders' – and the consequences of their use as 'knowledge production tools' – has an extensive critical scholarship.[59] In 2018 the historian Nicole Nelson explored the use of laboratory mice in genetics research, arguing that their ability to 'straddle the boundary between the natural and the artificial' – they share an 'evolutionary history' with humans, but could be made to do things that would be impossible with human subjects – made them the 'perfect research tools'.[60]

The link with the 'natural world' (through evolution) – whilst being able to be placed in artificial settings – certainly played a part in the use of animal experiments by behaviourally inclined psychologists. However, Nelson's assertion that genetic researchers are 'committed to complexity' in their awareness of the limits of mice in illustrating 'disorders that are uniquely human' presents an important contrast to the use of animal models in studies of compulsive behaviour.[61] Nelson wrote, 'although mice may offer many advantages as research tools, it was recognised [by a group of genetic researchers] that they cannot replicate the many core features of behavioural disorders. Mice cannot lose their jobs or damage their relationships … and they cannot talk about their subjective experience'.[62] Nevertheless, for the likes of Rachman and Eysenck, the exclusion of the 'uniquely human' was precisely the point. As Nancy Campbell has argued with regard to the use of primates by researchers formulating ideas about addiction in interwar America, models derived from animals imposed a constraint on the explanations of behaviour in humans: they enabled pathological symptoms to be understood as the result of processes devoid of both subjective and social context.[63] This enabled psychologists to establish a break with analytic case studies, whilst displaying an adherence to what was considered 'natural' and 'scientific'. As Eysenck remarked, if the 'laws' of behaviour extended across all organisms, they had a greater degree of 'objectivity'.[64] The elimination of human communication had significant implications for the differentiation of 'obsessions' and 'compulsions' on an axis of inaccessible thoughts and visible behaviours. Put simply, constraining the explanation of obsessional phenomena in terms of what was observable in animals meant that thoughts could not be accounted for.

In their first publication on the treatment of a case of 'obsessional neurosis' in 1970, Rachman, Hodgson and Marzilier referred to an experiment conducted in 1949 'which had proved successful in overcoming compulsive behaviours in animals'.[65] They were referring to a study conducted by the American psychologist Norman Maier. In his laboratory at the University of Michigan in the 1940s, Maier researched the 'learning patterns' of rats by constructing an apparatus in which they had the option of jumping towards one of two windows: one window had a reward (food) and the other had a punishment

[58] Discussed in Danziger, op. cit. (15), p. 87.

[59] Rebecca Lemov, 'World as laboratory: experiments with mice, mazes, and men', *Journal of the History of Biology* (2007) 40(4); A. Clarke and E. Friese, 'Transposing bodies of knowledge and technique: animal models at work in reproductive science', *Social Studies of Science* (2012) 42(1). Donna Harraway, *Primate Visions: Gender, Race, and Nature in the World of Modern Science*, London: Routledge, 1989.

[60] Nicole Nelson, *Model Behaviour: Animal Experiments, Complexity, and the Genetics of Psychiatric Disorders*, Chicago: The University of Chicago Press, 2018, p. 4.

[61] Nelson, op. cit. (60).

[62] Nelson, op. cit. (60), p. 7.

[63] N. Campbell, *Discovering Addiction: The Science and Politics of Substance Abuse Research*, Ann Arbor: Michigan University Press, 2007.

[64] Eysenck, op. cit. (40), p. 12.

[65] Hodgson, Marzilier and Rachman, op. cit. (28), p. 388.

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(a bump on the nose).[66] Maier demonstrated that when he randomized which window led to reward and which led to punishment, the rats were placed in an 'insoluble situation' and began engaging in 'stereotyped' and 'rigid' jumping behaviour which became 'fixated'.[67] To overcome this repetitive jumping, the psychologist cornered the rats and used his hand to 'guide' them through the windows, this time neither resulting in a bump on the nose. After repeating the 'guidance' for a few days, Maier reported that the rats ceased in their 'fixated' and 'rigid' jumping and began to move through the windows with ease. Commenting on this experiment in 1965, Rachman and Eysenck stated that when an animal is placed in a 'problem situation ... it adopts a behavioural response which reduces anxiety', and this anxiety reduction subsequently becomes 'self-reinforcing'.[68] The psychologists remarked that the 'fixated' jumping of Maier's rats had the 'senseless quality typical of compulsive behaviour' and that, like the rats, compulsive behaviour was performed to reduce anxiety.[69] It was through this process, they suggested, that it became repetitive.

The jump from 'fixated' behaviour in laboratory rats to repetitive 'rituals' in psychiatric patients had first been made by the Maudsley-trained psychologist Victor Meyer, who expanded the model of 'anxiety-reducing' behaviours to the treatment of two 'obsessional patients' in 1966.[70] Drawing on the animal literature, as well as his prior research on phobias, Meyer hypothesized that if 'obsessional rituals' did become 'fixated' due to their capacity to reduce anxiety, then the connection between fear (stimulus) and behaviour (response) could be disrupted through preventing the 'ritual act'. The hypothesis was tested on two psychiatric patients who had been diagnosed with 'obsessional neurosis'. The first had a 'fear of dirt' and 'would only touch foreign objects with tissue paper'.[71] The second experienced 'compulsive thoughts of a blasphemous and sexual nature' which were followed by 'avoiding any activity with sexual meaning, e.g., opening drawers, cleaning a pipe, eating oblong objects'.[72] The 'experimental' treatment involved Meyer presenting these individuals with what they feared and preventing them from enacting their usual behavioural response. For example, the woman with 'compulsive thoughts' was told to 'imagine having sexual intercourse with the Holy Ghost' whilst Meyer stopped her from performing what he saw as her ritual activities.[73] Through enacting these procedures, Meyer reported that having 'obsessionals' regularly confront their fears, and preventing them from enacting 'anxiety-reducing' behaviours, did in fact lead to a reduction in their pathological symptoms. It is important to note that Meyer did not differentiate between 'obsessional symptoms' as 'obsessions' and 'compulsions'. Rather he referred to the 'compelling' quality of thoughts and rituals.

The importance of Meyer's work cannot be overstated. His principle that exposing individuals to fearful 'stimuli' and then preventing their behavioural response ('ritual') led to a reduction of 'obsessional symptoms' provided the therapeutic framework underpinning the experiments conducted by Rachman and his colleagues in the 1970s, and remains the basis of the treatment model used in OCD today. In 2009 Rachman reflected,

> What he did was very brave. Meyer applied to humans what studies had shown to work on frightened animals: if they were exposed to what scared them for a long

[66] N.R.F Maier, *Frustration: The Study of Behaviour without a Goal*, New York: McGraw Hill, 1949, p. 126.
[67] Maier, op. cit. (66), p. 126.
[68] Eysenck and Rachman., op. cit. (26), p. 120.
[69] Eysenck and Rachman, op. cit. (26).
[70] Victor Meyer, 'Modification of expectations in cases with obsessional rituals', *Behaviour Research and Therapy* (1966) 4(4), pp. 273–80, 273.
[71] Meyer, op. cit. (70), p. 275.
[72] Meyer, op. cit. (70), p. 276.
[73] Meyer, op. cit. (70).

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> period of time, and prevented from leaving the situation, they became less scared. Therapists were afraid to do this with patients … he had broken the ice.[74]

Despite this retrospective admiration, Rachman and his colleagues made a significant modification to Meyer's framework. Central to the conception of 'rituals' outlined by Meyer was the idea that these behaviours were not 'senseless' and 'automatic' (as the study of rats had suggested) but were driven by a 'fear that if these acts are not performed [the patient's] family will eventually be afflicted by some disaster'.[75] This notion shaped his selection of patients, who both 'believed that non-performance of rituals would lead to "disastrous consequences"' and provided the rationale behind treatment: 'if the obsessional is forced to remain in a feared situation and prevented from carrying out his rituals, he may discover that the feared *consequence* no longer takes place'.[76] In fact, Meyer wrote that it was these 'future expectations' that distinguished 'obsessional rituals' from phobic behaviours (such as avoidance), and this was why prior behavioural procedures, which had all been designed to treat phobias, had failed to work with obsessionals. The fact that Meyer titled his paper the 'modification of expectations' points to the centrality of future events in his model; it was the 'expectations' under modification. Significantly, Rachman and his colleagues took the exposure and ritual-prevention part of Meyer's work but made a choice to exclude the aspect relating to future 'anticipation'/expectation. This, they argued, was 'not a sufficient condition' for 'successful' symptom modification.[77]

Instead, in their experiments in the early 1970s, Rachman focused entirely on the performance of repetitive acts in the present, obscuring any discussion of anticipatory events. He had also described the 'fixated' jumping of rats as having the 'senseless quality typical of compulsive behaviour'.[78] The use of the term 'senseless' in describing the behaviour of both rats and obsessionals points to an understanding of pathology tied up with irrationality as well as the lack of meaning necessary in a purely functional account. It established a firm contrast with psychoanalytic reasoning in which the 'seemingly senseless' acts of obsessional neurotics contained displaced meaning – and therapy constituted a process of sense making (finding the original cause).[79] For Rachman, asking individuals about their *beliefs* with regard to future events risked entering into the realm of unverifiable speculation, which he was intent on avoiding. In the studies conducted throughout the early 1970s, there was no discussion of why 'compulsive rituals' were performed or whether they held meaning for the individual at hand, thus excluding the more complex and less immediately visible factors.

In taking the model of rats as an explanation of obsessional behaviour, Rachman engaged in what Kurt Danzinger has described as 'naïve verbal realism': if one talked about the 'fixation' of a rat when jumping towards a window in relation to the 'fixation' of a human engaged in 'ritual behaviour', one had already established these were the same things and could therefore be explained through the same mechanism.[80] The hypothetical model of 'compulsions' established through the animal literature consisted of two parts: a fear producing stimuli, referred to as a 'danger signal', and an action serving to 'reduce that fear'.[81] The initial 'danger signal' (the equivalent of a bump on the nose) was

[74] S. Rachman, 'Psychological treatment of anxiety: the evolution of behaviour therapy and cognitive behaviour therapy', *Annual Review of Clinical Psychology* (2009) 5, pp. 97–119, 110.
[75] Meyer, op. cit. (70), p. 274.
[76] Meyer, op. cit. (70), added emphasis.
[77] Rachman, Hodgson and Marzilier, op. cit. (28), p. 385.
[78] Eysenck and Rachman, op. cit. (26), p. 120.
[79] Freud, op. cit. (21), p. 2134.
[80] Danzinger, op. cit. (15), p. 117.
[81] Rachman, Hodgson and Marzilier, op. cit. (28), p. 385.

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conceptualized as a 'maladaptive autonomic response' whilst the 'motor avoidance response' was the visible behaviour.[82] With regard to one of their cases, for example, Rachman, Hodgson and Marzilier referred to the individual's 'excessive washing rituals' as the 'behavioural pattern' indicating a 'fear of contamination'.[83] It is significant that this 'fear' of contamination was not described as a thought or rumination, but as the 'stimuli' producing an observable response. As Danzinger notes, 'behaviour' never just referred to movement (the beating of the heart was not a 'behaviour'), but had an entire conceptual underpinning which pointed to inferences about the mind, without explicitly mentioning it.[84] The use of the category of 'behaviour' allowed psychologists to 'use this language whilst paying their respects to an ideal of scientific objectivity': they could claim to be studying psychological processes in so far as they manifested themselves in visible action.[85]

Inventing a 'practical science'

In line with the previous work that had been conducted by clinical psychologists at the Maudsley throughout the 1950s and 1960s – on bed wetting, tics and phobic 'avoidance' – the concept of 'compulsive rituals' was constituted through the application of a series of experimental interventions aimed at the visible 'modification' of behaviour.[86] This was part of a treatment model which defined successful recovery when a reduction in 'pathological' acts, such as the washing of one's hands, could be accounted for through comparison with pre-treatment frequency. The criterion of behavioural modification was central to the exclusion of ruminations from these early studies. In 1970, Rachman wrote that 'during the course of a research programme which is directed at the modification of obsessional neurosis ... it was considered best to concentrate on overt, compulsive behaviour'.[87] This statement – particularly the words 'considered best' – suggests that the ritual/rumination division was a practical decision made within the confines of a research agenda: to 'modify', and thus be shown to treat, obsessional neurosis. During this period clinical psychologists were seeking to equate 'effective' therapeutics with an observable change in symptoms, and in this context 'obsessional patients who suffered from ruminations but displayed little or no compulsive behaviour were not included in the formal systematic studies'.[88] It also adds further explanation as to why the notion of 'future expectations' was not seen as 'a sufficient condition for symptom modification'; such expectations lay outside the remit of observable behavioural change.

The experiments of the early 1970s were framed around testing the hypothesis, derived from animal analogies and Meyer's experimental treatment, that 'compulsions' were anxiety-reducing behaviours which could be 'made extinct through exposing individuals to what they feared and preventing them from carrying out their pathological behavioural response'.[89] It is important to emphasize that the line between 'experiment' and 'therapy' is never clearly drawn in these texts. This is evident in the ease with which the psychologists move between referring to themselves as 'experimenter' and 'therapist', and their practice as both 'experimental' and 'therapeutic' modification. The 'subjects' chosen for the studies were also those that fit the demands of the experimental situation. Not

[82] Rachman, Hodgson and Marzilier, op. cit. (28).
[83] Rachman, Hodgson and Marzilier, op. cit. (28).
[84] Danzinger, op. cit., (15), p. 92.
[85] Danzinger, op. cit. (15), p. 93.
[86] H.G. Jones, 'The application of conditioning and learning techniques to the treatment of a psychiatric patient', *Journal of Abnormal and Social Psychology* (1956) 52(3).
[87] Rachman, op. cit. (29), p. 231.
[88] Rachman, op. cit. (29).
[89] Rachman, Hodgson and Marzilier, op. cit. (28), p. 387.

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only did this criterion exclude patients with ruminations, but the initial experiments on 'compulsions' were carried out exclusively on psychiatric inpatients with clear washing rituals. The sole inclusion of 'washers' was not justified by Rachman *et al.* on conceptual grounds, but for pragmatic reasons. He wrote that the 'necessity to provoke the urge to carry out compulsive rituals in an experimental setting proved *easy* to accomplish in patients with cleaning rituals based on fears of contamination'.[90] In response to this pragmatic rationale – and their 'easy' fit into the model of stimulus (fear)–response (visible behaviour) – the appendix of participants included in the 1970, 1971 and 1972 studies consisted entirely of 'psychiatric inpatients' with 'clear washing behaviours' linked with a 'fear of contamination' relating to external objects and materials.

The first case to participate in an experiment run by Rachman was an individual who spent four and a half hours a day washing. He undressed 'before urinating or defecating' and described his routine as follows:

> in the toilet I wash my hands once under the tap with soap then wash the sink then fill it up with hot water. I then wash my hands and arms, rinse them, then wash my face. Then I wash my hands again, dry my hands and face, undo the toilet door with a paper towel then pull up my trouser zip then wash my hands and arms again.[91]

The 'experimental modification' of this person's behaviour took place through getting him to engage in exposure and ritual prevention. He was required to touch a 'hierarchy' of objects he considered contaminated: a small dish of marmalade, a jar of cigarette ash, a tin of mud, a small bottle of urine and a smear of dog excrement.[92] The touching was 'demonstrated to the patient by a calm and reassuring therapist' before he 'shadowed his therapist's actions'.[93] The 'obsessional' touched the items from the bottom of the hierarchy first, starting with the mud and eventually placing his hands in the excrement. After each touching, he was prevented from washing his hands for increased periods of time (from thirty minutes to three hours). A subsequent case involved a person with a 'fear of contamination from animals' who also engaged in 'excessive washing rituals'.[94] The first session consisted of exposing her to items from the top of her 'fear hierarchy': 'a hamster was set free to run around her bed, towels, clothes and personal belongings. It was placed in her handbag and also her hair'.[95] She too was prevented from washing for increased lengths of time. The intention with both of these cases was to disrupt the pathological 'reinforcement connection' between stimulus (contaminated object/material) and response (washing) – thus making the repetitive behaviour 'extinct'.

Demonstrating the clinical/experimental 'effectiveness' of these experiments involved a variety of measurements, which ranged from a visible reduction of compulsive acts through to determining a decreased level of avoidance and fear in relation to a 'contaminated' object. The first experimental subject, for example, was discharged when his 'compulsive handwashing' had been 'almost totally eliminated' and was not considered by Rachman 'unduly excessive'.[96] With regard to the woman discussed above, the

[90] Stanley Rachman and Gisela Roper, 'Obsessional-compulsive checking: experimental replication and development', *Behaviour Research and Therapy*, 1975, pp. 271–7, 271, added emphasis.

[91] Rachman, Hodgson and Marzilier, op. cit. (28), p. 388.

[92] Rachman, Hodgson and Marzilier, op. cit. (28).

[93] Rachman, Hodgson and Marzilier, op. cit. (28).

[94] Rachman, Hodgson and Marks, op. cit. (28), p. 239. The fact that they were 'excessive' also made it easier to account for behavioural change. In the 1971 study 'two patients were excluded because the disorder was only mild'.

[95] Rachman, Hodgson and Marks, op. cit. (28).

[96] Rachman, Hodgson and Marzilier, op. cit. (28), p. 390.

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'effectiveness' of each intervention was identified using three metrics: an avoidance test, which measured the proximity in which she could place herself in relation to a contaminated object, a 'fear thermometer' where she rated from one (calm) to ten (terrified) how she felt about touching actions, and a pulsometer to record her pulse rate.[97] These scales were taken before and after the behavioural intervention in order to ascertain rates of change. It is significant that the 'fear thermometer' involved measuring a qualitative, rather than behavioural, response – something the psychologists do not acknowledge. What was important was that the participant's 'fear' was made visible though a concrete rating scale that approximated the visibility of behaviour. Rhodri Hayward's discussion of social psychologists at the Maudsley using rating scales to 'make visible' the dynamics of stress in this period, as well as psychometric testing of intelligence in the early twentieth century, illustrates this as a wider trend in psychological research.[98] Such testing devices acted to define psychological methods in 'scientific' terms through the depiction of visible change. Rather than any discussion of why rituals were performed or the meaning they held for people, Rachman *et al.* transformed expressions of fear into empirical data.

Such an approach to measuring therapeutic change related to the broader way in which Maudsley clinical psychologists thought about treatment 'efficacy' in this period. In 1952 Eysenck had published a controversial paper which became something of a benchmark for subsequent psychological research.[99] Through a broad comparison between American insurance industry data and state hospital records, the psychologist proposed that the rates of recovery achieved through 'psychotherapy' (undefined) were no better than rates of spontaneous remission amongst people suffering from a broad spectrum of neuroses.[100] Nick Haslam and Roderick Buchanan argue that Eysenck 'loaded the dice against psychotherapy' by equating remission with discharge or discontinuation of care, and classifying dropouts and 'slightly improved' ratings as therapeutic failures.[101] Whilst Eysenck's figure of spontaneous recovery (66 per cent) was 'probably too high', since insurance industries had an interest in divesting themselves of patients, the publication was 'successful in changing the basis of psychotherapeutic evidence from insight to outcome'.[102] Rachman retrospectively commented that Eysenck's 1952 paper 'provoked a storm' and 'hailed the beginnings of a new evaluative tradition'.[103] In the decades that followed, clinical psychologists at the Maudsley and elsewhere sought to illustrate that their interventions produced rates of 'cure' which convincingly exceeded the 66 per cent threshold. The focus on behaviour, as well as the numerous devices to quantify and externalize outcomes, was part of this desire to produce an intervention for compulsions that signified a substantial rate of visible therapeutic change. Such a move excluded traditional analytic approaches, where any attempts to study outcomes were seen as unable to capture, and might even compromise, the therapeutic process.[104]

[97] Rachman, Hodgson and Marks, op. cit. (28), p. 245.

[98] Rhodri Hayward, 'Sadness in Camberwell: imagining stress in post-war Britain', in D. Cantor and Ed Ramsden (eds.), *Stress, Trauma and Adaptation in the Twentieth Century*, Rochester: University of Rochester Press, 2014. On testing see Catherine Malabou, *Morphing Intelligence*, New York: Columbia University Press, 2019; Coreen McGuire, *Measuring Difference, Numbering Normal*, Manchester: Manchester University Press, 2020.

[99] H. Eysenck, 'The effects of psychotherapy: an evaluation', *Journal of Consulting Psychology* (1952) 16(5).

[100] Rhodri Hayward, *The Transformation of the Psyche in British Primary Care, 1880–1970*, London: Bloomsbury Academic, 2014, p. 128.

[101] Roderick Buchanan and Nick Haslam, 'Psychotherapy (the development of psychotherapy in the modern era)', Chapter 18 in Robert J. Sternberg and Wade E. Pickren (eds.), *The Cambridge Handbook of the Intellectual History of Psychology*, Cambridge: Cambridge University Press, 2019, pp. 468–94, 484.

[102] Hayward, op. cit. (100), p. 128.

[103] Stanley Rachman, 'Hans Eysenck's contributions to clinical psychology and behaviour therapy', *Personality and Individual Differences* (2016) 103, pp. 91–2, 92.

[104] Rachel Rosner, 'The "splendid isolation" of Aaron T. Beck', *Isis* (2014) 105(4).

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The behaviourally inclined psychologists were intent on approaching obsessional phenomena 'without resorting to the obscure hidden draws of the Freudian soul'.[105] There was a move away from the clinical structure of pathological categories to a focus on external symptoms, and the development of a treatment (exposure–response prevention) that produced observable, and calculable, results. When a patient was seen to consistently complete an 'exposure' without 'doing the compulsions', the move was made to the next item on the hierarchy. The success of this experimental modification was accounted for through the measurement of change: either the visible behaviours (washing) or the accompanying fear-reduction (enumerated). This indicates a substantial reconceptualization of therapeutics which, rather than involving psychic exploration, equated successful therapeutic outcomes with an observable reduction in 'pathological' behaviour. The perceived therapeutic effects were also equated with experimental success, with a reduction in washing behaviours signifying a confirmation of the original hypothesis. This meant that both the behavioural treatment of exposure and ritual prevention, and the concept of 'compulsions' as 'anxiety-reducing behaviours', was being constituted and 'verified' throughout these experiments.[106] As Nikolas Rose states, psychological truths are 'no simpe materialization of theory'; rather 'the disciplinization of psychology as a positive science entailed the incorporation of technical forms of positivity into the object of psychology'.[107] The idea of psychological 'evidence' based around observability transformed obsessional phenomena into objects that could be measured (washing compulsions).

In addition to the general emphasis on visibility in philosophical empiricism, a further reason for the modification of visible 'compulsive behaviour' was to do with economic imperatives. There was a view amongst the wider mental health professions that 'obsessional illnesses' were chronic and resistant to existing treatments, and in some cases invasive – and irreversible – leucotomies continued to be used.[108] Developing an 'effective' intervention – defined through a measurable reduction in visible symptoms – was thus seen as a worthwhile investment, especially in the context of state-funded mental healthcare. This is suggested by the substantial research conducted into 'compulsive rituals' in this period, and the fact that these experiments received substantial Medical Research Council grant funding.[109] At the end of a trial in 1975, which followed ten 'compulsive washers' who had received behavioural treatment, the psychiatrist Isaac Marks wrote that 'the consideration of cost-effectiveness obviously affects all medical and psychological treatment, but is particularly salient in a previously untreatable condition'.[110] Such a statement was supported by reference to the 'successful' outcome of the experiment: 'as patients stopped their rituals, time became available for constructive activities, such as the development of a normal working life'.[111] This quote provides a specific example of Sarah Marks's argument that 'given the budget constraints of the post-war nationalised healthcare service, investment into rates of efficacy of treatments in psychology … can be seen as a rational consequence of the economics of healthcare'.[112]

[105] H.P. Castel, 'A new history of ourselves, in the shadow of our obsessions and compulsions', *Philosophy, Psychiatry, and Psychology* (2014) 21(4), pp. 229–309, 304.

[106] Marks, Hodgson and Rachman., op. cit. (28).

[107] Nikolas Rose, 'Power and subjectivity: critical history and psychology', *Academy for Psychoanalytic Arts*, https://academyanalyticarts.org/rose-power-subjectivity (accessed 4 July 2023).

[108] Frederick Price, *Textbook of the Practice of Medicine*, Oxford: Oxford Medical Press, 1966, p. 1199.

[109] Stanley Rachman, 'Nature and modification of obsessional/compulsive behaviour', grant no. G973/203, Medical Research Council, National Archives (accessed June 2022). This file references 'Rachman, S., 'Behavioural Treatment of Obsessional Neurosis, 1970–1973', grant no. GP71/288/C. However, both UKRI and the MRC confirm that this grant file no longer exists.

[110] Marks, Hodgson and Rachman, op. cit. (28), p. 364.

[111] Marks, Hodgson and Rachman, op. cit. (28), p. 364.

[112] S. Marks, op. cit. (16), p. 5.

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Presenting an intervention which could be shown to reduce the observable symptoms (compulsions) associated with 'obsessional illnesses' was considered 'effective' in response to a previously untreatable, and therefore costly, form of mental distress. Long-term psychiatric patients – with visible compulsions – could once again be released into the workforce.

Conclusions

To conclude, this article has outlined the first stage in how the contemporary psychological category of obsessive–compulsive disorder (OCD) was built. It has illustrated how, in the early 1970s, a group of clinical psychologists at the Institute of Psychiatry and the Maudsley hospital, headed by Stanley Rachman, distinguished between the previously undifferentiated concepts of 'obsessional ruminations' and 'compulsive rituals', and conducted extensive experimental investigations on the latter. This built up a model of 'compulsions' as anxiety-reducing behaviours, which could be treated through a novel behavioural treatment. Crucially, I have charted how the decision to divide 'obsessions' and 'compulsions' was based on an adherence amongst clinical psychologists at the Maudsley to an empirical conception of science which emphasized observability. Compulsive rituals were identified as 'visible' through their representation in animal analogies and through their amenability to an experimental form of treatment which prioritized marked behavioural change. Within the scientific frameworks of these new clinical psychologists, who were seeking to demarcate their profession from psychoanalysis and medical psychiatry, ruminative thoughts were rendered inaccessible and unamenable to inquiry.

Both the decision to differentiate between 'obsessions' and 'compulsions' in this period, and the exclusive focus on observable behaviours, echo through the development of OCD right up to the present day. In fact, OCD as a category made up of visible behavioural compulsions and internal mental obsessions never escapes from this historical decision and reductionism. Immediately following the studies in the early 1970s, Rachman and his colleagues replicated the experiments on washing behaviours with regard to acts of 'checking' (e.g. whether the door is unlocked). Despite the differences between these symptoms, the psychologists managed to squeeze 'washing' and 'checking' into a single model of 'compulsions' as two variations of the same behaviour. When there was a return to 'obsessional ruminations' in the late 1970s, the symptom was understood through the lens of external visible behaviours. Terms such as 'mental rituals' were used and the intervention of 'mental exposure' was put forward as an evidence-led treatment.[113] Whilst aspects of obsessions were modified somewhat with the advent of cognitive models in the late 1980s, the principle behavioural components have remained foundational to the psychological category. There is a continued emphasis on visible symptoms in diagnostic registers and cultural presentations of OCD, and the 'gold standard' treatment for the disorder in the UK continues to be the behavioural technique of exposure and response prevention (ERP).

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[113] Mental rituals are discussed in contemporary guidelines of OCD. They became the key component of the cognitive–behavioural model of the disorder. See Paul Salkovskis, E. Forrester and C. Richards, 'Cognitive–behavioural approaches to obsessional thinking', *British Journal of Psychiatry Supplement* (1999) 35, pp. 53–63.

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