

## CHAPTER TEN

# Repression, defence, and the psychology of science\*

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**D**uring the Battle of Copenhagen in 1801, Admiral Horatio Nelson, blind in one eye, is said to have been given a signal by Sir Hyde Parker to withdraw in the face of overwhelming Danish forces. In turn, Nelson is said to have ignored the signal, claiming: “I only have one eye; I have a right to be blind sometimes; I really do not see the signal” (in Gardiner, 1997, p. 181). This incident is said to have given rise to the saying “turning a blind eye” (or knowingly ignoring unpleasant facts). A teacher, for instance, might pretend not to notice a student cheating during an exam, or a parent might feign ignorance of a child’s drug usage. In such cases, and as in Nelson’s example above, the person turning a blind eye is, in fact, cognisant of the situation being ignored. Nevertheless, the individual would prefer not to know and minimises facing the disconcerting situation.

Freud similarly refers to a “blindness of the seeing eye”, but, unlike the cases above, such blindness involves an apparent paradox with

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respect to both knowing and not knowing some fact simultaneously. The first reference to this is found in the *Studies in Hysteria* (Breuer & Freud, 1895d) in the case of Miss Lucy R, who had come to Freud suffering from a variety of complications including olfactory hallucinations (a smell of burnt pudding). Freud's analysis traced the symptoms back to an event where "opposing affects had been in conflict with each other" and the smell had been contemporaneous (Freud in Breuer & Freud, 1895d, p. 115). Miss Lucy R had decided to leave the children she had been caring for as a nanny and return to her mother, but she also loved her employer and desired to become a replacement mother of the children. This desire had been repressed and the smell subsequently became a "symbol" of the event.

In discussing this repression, Freud notes that Miss Lucy R could recall the initial "act of will" in which the love for her employer was repressed. For a time she had been aware of these desires but after realising that these were unfulfillable "she decided to banish the whole business from her mind" (Freud in Breuer & Freud, 1895d, p. 118). Miss Lucy R. subsequently agrees with Freud's interpretation of the repressed desire, leading Freud to ask: "But if you knew you loved your employer why didn't you tell me?", and she responds: "I didn't know—or rather, I didn't want to know. I wanted to drive it out of my head and not think of it again; and I believe latterly I have succeeded" (in Breuer & Freud, 1895d, p. 117).

The discussion above has led some authors to conclude that repression may occur consciously (e.g., Erdelyi, 1990, 2006; Macmillan, 1991), in contradistinction to the commonly held position that repression is necessarily considered an unconscious process (e.g., A. Freud, 1968). However, Freud himself indicates another possible interpretation with respect to Miss Lucy R's apparent knowledge and ignorance of the same event. Commenting on the apparent paradox, Freud writes: "I have never managed to give a better description than this of the strange state of mind in which one knows and does not know a thing at the same time. It is clearly impossible to understand it unless one has been in such a state oneself" (Freud in Breuer & Freud, 1895d, p. 117*n*). He continues:

I myself have had a very remarkable experience of this sort, which is still clearly before me. If I try to recollect what went on in my mind at that time I can get hold of very little. What happened was that I saw something which did not fit in at all with my expectation; yet I did not allow what I saw to disturb my fixed plan in

the least, though the perception should have put a stop to it, I was unconscious of any contradiction in this; nor was I aware of my feelings of repulsion, which must nevertheless undoubtedly have been responsible for the perception producing no psychical effect. I was afflicted by that blindness of the seeing eye which is so astonishing in the attitude of mothers to their daughters, husbands to their wives and rulers to their favourites. (Freud in Breuer & Freud, 1895d, p. 117n)

While Freud does not elaborate further, what can be surmised is that some fact repulsed Freud so much that his *attention could not attend to it*. Nevertheless, the fact must have been *known*—for he was repulsed by it—even if this occurred unknowingly. In other words, Freud unconsciously knew some fact without knowing it: his unconscious repulsion to some fact prevented recognising that same state of affairs.

### *The scientific standing of repression*

The examples of turning a blind eye and Freud's "blindness of the seeing eye" point to the possibility of varieties of ignoring instigated by a common motivation to avoid facing unpleasant circumstances. However, while no one would dispute the possibility of turning a blind eye to certain unpleasant situations, the possibilities of repression and the "blindness of the seeing eye" are much more contentious. For instance, the association between repression and the dynamic unconscious is judged to be problematic (e.g., Grünbaum, this volume), and while turning a blind eye is purported to occur "consciously", the very possibility of unconscious mental processes still receives sceptical treatment even today (see Talvitie, 2009, 2012). Furthermore, both the evidential standing of repression (e.g., Erwin, 1996, this volume, Chapter Two; Grünbaum, 1983) and the logic of repression theory (e.g., Macmillan, 1991)<sup>1</sup> are questioned. The case for repression is not made simpler by the apparent paradox entailed in simultaneously knowing and not knowing the same event, which, at first glance, makes repression appear inconceivable (see Maze & Henry, 1996). It is little wonder, then, that even those sympathetic to the theory of repression are uncertain of its scientific value. For instance, Nesse (1990) writes that although clinically important, "[repression] remains an anomalous and awkward concept that has kept psychoanalysis apart from the rest of science" (p. 262).

These question marks over repression are all the more striking in light of Freud's declaration that the "theory of repression is the

corner-stone on which the whole structure of psycho-analysis rests" (Freud, 1914d, p. 16) and that it "is possible to take repression as a centre and bring all the elements of psycho-analytic theory into relation with it" (Freud, 1925c, p. 30). The centrality of repression is related to the causal role attributed to repression with respect to the psychoneuroses. Grünbaum (1983) here writes that "[the] repression-aetiology of psychoneuroses ... is *the* major pillar of the Freudian structure" (p. 149, his italics) and should repression then be found to be indefensible, then psychoanalysis as an explanatory framework for the psychoneuroses also fails.

However, while the apparent question marks over repression may suggest that there is very little scientific merit in pursuing the topic, there is no logical problem with Freud's theory of repression and the "blindness of the seeing eye". The issue is resolved simply by postulating that repression *prevents knowing (or acknowledging) that the repressed is known* (Boag, 2007b, 2012). An anxiety-provoking state of affairs might instigate a repressive response, preventing reflection on the fact that the distressing event is known. Allowing for the repressed to be known (but in such a way that reflection on this act is prevented) further permits explaining resistance, objectless anxiety, and "after-pressure" (secondary repression), all of which involve anxiety with respect to knowing the repressed (but not knowing that the repressed is known)<sup>2</sup> (see Boag, 2012, Chapter Eleven). Furthermore, there is no logical difficulty with unconscious processes (see Boag, 2008b, 2012) and there is no shortage of evidence for unconscious knowing (see Brakel, 2009).

Additionally, far from repression keeping psychoanalysis out of science, this chapter instead proposes that repression—as motivated ignoring—is one of Freud's most important contributions to the psychology of science for the simple reason that it highlights the possibility of motivated blind spots in scientific enquiry. To demonstrate this, this paper elaborates, with the help of Erdelyi (1990, 2006), Freud's account of a series of defensive activities, where repression can be seen within the context of a variety of everyday processes involving motivated ignoring. Following on from this, Freud's contribution to the psychology of science is discussed in the context of the relationship between repression and defence and the issue of resistance to scientific progress. The motivational basis of repressive processes is discussed in terms of mental reactions instigated by pain avoidance, leading to motivated ignoring that may give rise to both self-deception and blind spots within

any field of enquiry. Here a psychodynamic account of human nature is important because it addresses the systematic connection between motivation, affects, and cognition, as well as indicating how these factors may combine to contribute to motivated ignoring in scientific research. An example of where varieties of motivated ignoring may be contributing to error in psychological science is then developed in the context of psychometrics and “pathological science” (Michell, 2000, 2008).

### *The concept of repression and defence*

The concept of repression itself appears fairly straightforward. Freud writes that “*the essence of repression lies simply in turning something away, and keeping it at a distance, from the conscious*” (Freud, 1915e, p. 147, his italics). Here repression is simply a form of motivated ignoring (selective inattention), and repression initially takes on theoretical significance within psychoanalytic theory due to its explanatory value. A consistent theme in Freud’s account is that repression does not destroy the repressed. Instead, the repressed remains causally active and persists in the direction of conscious thinking (Freud, 1900a, p. 577; 1915e, p. 166; 1919g, p. 260; 1933a, p. 68), and the symptoms of the psychoneuroses (and other phenomena such as dreams) are explained in terms of repressed wishes acquiring substitutive outlets (e.g., Freud, 1926f, p. 267).

However, the apparent simplicity of repression as motivated ignoring betrays a hidden complexity with respect to understanding the relation between repression and defence. Madison (1961) writes that the “most difficult and persistent problem in the theory of repression is the relation between repression and defence” (p. 15). As is generally well known, Freud appears to initially use the terms “repression” and “defence” synonymously; for example, writing that “sexuality seems to play a principal part in the pathogenesis of hysteria as a source of psychical traumas and as a motive for ‘defence’—that is, for repressing ideas from consciousness” (Breuer & Freud, 1895d, p. xxix). A decade later, however, Freud almost exclusively uses the term “repression”: “... accidental influences receded still further into the background as compared with ‘repression’ (as I now began to say instead of ‘defence’)” (Freud, 1906a, p. 276). Later still, in 1926, “repression” becomes a distinct mechanism of “defence”: “[Defence] can cover all these processes that have the same purpose—namely, the protection of the ego against

instinctual demands—and for subsuming repression under it as a special case” (Freud, 1926d, p. 164). This latter, special case of repression is characterised by hysterical amnesia standing in contrast to other defences such as reaction-formation, isolation, undoing, and projection (Freud, 1926d, p. 163).

The view that repression is a special instance of defence has become the prevailing view (e.g., Arlow & Brenner, 1964; A. Freud, 1968; Nesse, 1990; Willick, 1995), and Sjöbäck (1973) claims that given this revision, rather than “repression”, Freud “would have called the *theory of defensive processes* the cornerstone on which the whole structure of psychoanalysis rests” (p. 1, his italics; cf. Willick, 1995, p. 485). However, even after this attempted clarification Freud himself remains inconsistent. As Madison (1961) notes, Freud “was never able to maintain the distinction he proposed in 1926, in which ‘repression’ was subordinated to ‘defence’—not even within the very volume in which he announced it” (p. 16). For example, although the term “repression” should apply only to hysterical forgetting, Freud speaks of the obsessional neurotic’s attempt to “try to repress ... by motor means” (Freud, 1926d, p. 120). Similarly Freud speaks of “repression by means of *reaction-formation* (in the ego)” (1926d, p. 102, his italics). Moreover, it appears that Freud continued to use repression and defence synonymously (e.g., “repression (or defence)”—Freud, 1926d, p. 123). The legacy from this is that terms such as “repression” and “defence” are used idiosyncratically within the literature. For example, B. P. Jones (1993) postulates five varieties of “repression”, only one corresponding to Freud’s narrow definition of hysterical amnesia.

While the different meanings for repression and defence invite confusion, there is nonetheless a common element with respect to motivated ignoring. Madison (1956), for instance, writes that all defences include motivated ignoring and that which distinguishes the various defences is the *target* that is denied awareness: memories are denied in hysteria, logical connections in obsessional neurosis, and ownership of thoughts and impulses in projection (Madison, 1956, 1961; cf. Freud, 1894a). Hence, argues Madison: “Repression (in the sense of unawareness) is not *one* of a number of defences, it is the essence of all defences” (Madison, 1956, p. 78, his italics). So conceptualised, repression can be seen as the basis of all defences (Gillett, 1988; Kinston & Cohen, 1988).

However, while motivated ignoring may be involved in all defence, there are also variations in the *degree* of ignorance involved in any defensive activity. Furthermore, such variations of unconsciousness

also appear to impact upon whether certain processes are considered plausible or not, a point demonstrable by comparing repression with ordinary “suppression”. Both repression and suppression involve motivated ignoring, but while repression remains controversial, suppression is universally accepted (see Boag, 2010). Erdelyi (1990, 2006) believes that the difficulties associated with accepting repression follow from the belief that repression is necessarily unconscious. Erdelyi notes, however, that if repression can occur consciously then there is no dispute that repression exists in terms of ordinary selective attention: “If repression = suppression, then everybody believes in repression. The myth morphs into the obvious” (Erdelyi, 2006, p. 500).

Evaluating Erdelyi’s claim depends, in part, upon what is precisely meant by “consciousness” (see Boag, 2008b, 2010). However, taken literally, the claim that repression *equals* suppression could be seen as an oversimplification, since even if repression involves consciousness (however contrived), there may be other features distinguishing repression from suppression. For instance, while turning a blind eye and blindness of the seeing eye may have a common element in terms of motivated ignoring, they appear nevertheless to be distinct phenomena, since turning a blind eye would not appear to have the same psychoneurotic consequences of Freudian repression “proper”. This notwithstanding, the spirit of Erdelyi’s suggestion here is the important matter. If repression is looked at broadly in terms of selective inattention (i.e., motivated ignoring), then there is no disputing that varieties of processes involving motivated ignoring exist. Turning a blind eye and blindness of the seeing eye, then, simply reflect varieties of motivated ignoring.

One objection raised by Erwin (1996) is that if Erdelyi is correct here then there are many such cases that could be described as “repression” (e.g., thinking about something pleasant to avoid an unpleasant situation), but that such instances are not distinctly “Freudian” (pp. 221–222). However, what Erdelyi is drawing attention to is simply the possibility of a series of activities involving motivated ignoring, as posited by Freud himself. Freud (1905c), for instance, writes that “[r]epression may, without doubt, be correctly described as the intermediate stage between a defensive reflex and a condemning judgement” (p. 175). Similarly:

Between repression and what may be termed the normal method of fending off what is distressing or unbearable, by means of recognising it, considering it, making a judgement upon it and taking

appropriate action about it, there lie a whole series of more or less clearly pathological methods of behaviour on the part of the ego. (Freud, 1936a, pp. 245–246)

Thus we can follow Freud's lead and posit a series of repressive activities (all of which involve motivated ignoring) some of which can be postulated as causally significant in the generation of psychoneurotic symptoms, and others not. While some may still dispute "strong" cases of repression (e.g., blindness of the seeing eye), clearly other instances of motivated ignoring are uncontroversial (e.g., turning a blind eye). Consequently, varieties of motivated ignoring exist, and determining which instances of repressive defences occur is a perfectly legitimate topic of scientific enquiry.

### *Resistances to scientific progress*

The significance of postulating a series of repressive activities is seen in Freud's discussion in *The resistances to psycho-analysis* (1925e) where he addresses a variety of factors that might impact upon the scientific assessment of theories. There Freud discusses the role of unpleasure and how it contributes to scientific evaluation: unpleasure underlies (but is not limited to) a range of reactions, including a general fear of novelty, "blows to narcissism", racial prejudice, and specific objections to the subject matter of psychoanalysis (e.g., infantile sexuality). According to Freud, all of these primitive, defensive reactions have the motive of unpleasure in common, and Freud believes that "the strongest resistances to psycho-analysis were not of an intellectual kind but arose from emotional sources" (p. 221). The significance of Freud's account here is that considerations of motivated resistance are relevant to all areas of scientific enquiry, since such resistance may subvert the scientific process. In other words, since we know that motivated ignoring occurs, it follows that it is necessary to attend to the possibility of such "resistance" in scientific enquiry.

However, it is this very issue of using repression as an *explanation* of resistances to Freudian theory that raises a variety of problems. Claiming that criticisms of one's theory are due to emotional resistances can, of course, be construed as a very convenient means of denouncing any critics of a theory and inoculating the theory against criticism. Here Grünbaum (1980) draws attention to what he refers to as "logically

circular *self-validation*” with respect to using repression to dismiss all scepticism of the theory of repression (p. 78): “it is illicit simply to *assume* the theory whose truth is first at issue, and then to invoke this very theory as a basis for a psychologistic dismissal of *evidential* criticism of its validity” (Grünbaum, 1980, p. 77, his italics; cf. Eysenck, 1985, p. 185). Furthermore, the history of psychoanalysis demonstrates that the early proponents of psychoanalysis—including Freud himself—appeared to all too easily dismiss one another’s theories in terms of such emotional reactions (e.g., father and brother complexes—see Lieberman & Kramer, 2012). Freud (1925e), in fact, even notes that a certain degree of scepticism benefits the scientist: carefully and cautiously evaluating claims is necessary for avoiding the uncritical acceptance of assertions that may be false (p. 213).

Nevertheless, even critics of repression theory do not appear to dispute that there may be motivated resistances to accepting theories, and Grünbaum (1980) himself notes that scientists may have emotional biases that may motivate one to either confirm or deny a theory. Grünbaum adds, however, that despite such biases, any researcher may nevertheless come across contradictory evidence and become convinced of the opposing view. However, of course, while this *may* occur it also may not, and so there is no guarantee that any motivationally biased researcher will accept disconfirming evidence should it be found. The important point, then, is that the reality of motivated ignoring and resistance requires clear consideration in any psychology of science.

### *Science and human nature*

As already noted, the possibility of motivated ignoring could be expected to be a major concern for any scientist, since it could interfere with the aim of discovering and accruing objective knowledge. Not only are our perceptual systems fallible, but errors and biases may also possibly arise when faced with “unpleasant facts”. Humans, for instance, experience disgust towards all manner of things, including moral issues (Chapman, Kim, Susskind, & Anderson, 2009), and disgust is but one factor that may potentially interfere with the objective assessment of any disgust-provoking stimulus. Given, then, that we know that emotional and motivational factors may, to varying degrees, bias our conclusions, the activity of successful scientific enquiry involves acknowledging facets of human nature that are potentially antithetical

to the aims of objectivity. Freud's own theory of human nature provides a useful platform here for understanding the psychology of science insofar as it emphasises the fundamental role of motivation, affects, and their relation to enquiry (e.g., Freud, 1900a, 1915c). For Freud (1915c), all mental activity is motivated in the interests of the drives: it is the primary drives that are interested in states of affairs relevant to their gratification (see Maze, 1983) and our interest in events is, then, never dispassionate enquiry but always motivated in relationship to "needs", even when it appears selfless or self-defeating. Thus, in contradistinction to the "rational ego" that is sometimes found in Freud's thinking (e.g., Freud, 1923b, p. 25), we can instead see the ego as an extension of the drives, and so any appearance of passionless rationality is at best a reflection of repression itself (see Maze, 1983).

While all behaviour and cognition is motivated, unpleasure occupies a primary role in instigating defensive activities. Freud writes that "psychical activity draws back from any event which might arouse unpleasure" (Freud, 1911b, p. 219) and repression is comparable to a "flight-reflex in the presence of painful stimuli" (Freud, 1901b, p. 147). Such responses are premised upon Freud's postulated, general motivating principle forming the basis of both normal and pathological behaviour: "The nervous system has the most decided inclination to a *flight from pain*" (Freud, 1950, p. 307, his italics), and in a draft sent to his early confidant Wilhelm Fliess (Draft K), Freud writes: "there is a normal trend towards defence—that is, an aversion to directing psychic energy in such a way that unpleasure results" (Freud in Masson, 1985, p. 163). This general trend forms the prototype of repression in terms of the psychical equivalent of withdrawing from painful stimuli: "This effortless and regular avoidance by the psychical process of the memory of anything that had once been distressing affords us the prototype and first example of *psychical repression*" (Freud, 1900a, p. 600, his italics). The prototype of repression here operates in a similar fashion to motor movements away from painful stimuli (Boag, 2007a).

Grünbaum (this volume), however, questions whether "motives of unpleasure" can serve as the basis of repression, claiming that the finding that people do remember painful experiences contradicts Freud's theory of unpleasure instigating repression. The issue that Grünbaum is trying to draw attention to here is that Freud's claim of the primacy of unpleasure as a motivating principle for repression

must be incorrect, because if this were the case then *all* (or at least nearly all) unpleasurable mental states would succumb to repression. Grünbaum writes:

Apparently, Freud assumes *axiomatically* that distressing mental states, such as forbidden wishes, trauma, disgust, anxiety, anger, shame, hate, guilt, and sadness—all of which are *unpleasurable*—almost always actuate, and then fuel, *forgetting* to the point of repression. Thus, repression regulates pleasure and unpleasure by defending our consciousness against various sorts of *negative affect*. (Grünbaum, this volume, page 13, his italics)

While acknowledging that Freud does discuss cases of painful events being remembered, Grünbaum believes that Freud never provides a satisfying account of this and concludes that Freud's lack of attention to the issue of unpleasurable memories being remembered is a major failing of his theory of repression:

... Freud's attempt ... to uphold his thesis of motivated forgetting is evasive and unavailing. Since some painful mental states are vividly remembered while others are forgotten or even repressed, I claim that *factors different from their painfulness determine whether they are remembered or forgotten*. For example, personality dispositions or situational variables may in fact be casually relevant. To the great detriment of his theory, Freud never came to grips with the *unfavourable* bearing of this key fact about the mnemonic effects of painfulness on the tenability of the following pillar of his theory of repression: When painful or forbidden experiences are forgotten, the forgetting is tantamount to their repression *due to their negative affect*, and thereby produces neurotic symptoms or other compromise-formations. (Grünbaum, this volume, page 14, his italics)

It should be noted here that Grünbaum is not attacking the possibility that unpleasure may motivate repression, but, rather, he takes issue with the causal efficacy of unpleasure as a sufficient condition for repression. However, Freud never stated that *all* painful experiences instigate "repression" per se, even if the primitive organism is inclined to avoid any form of unpleasure. Here Grünbaum ignores the relatively obvious *developmental* factor proposed by Freud, whereby all later (strong

cases of) repressions require a primal repression during a critical period (e.g., Freud, 1911c, 1915d; cf. Boag, 2012, pp. 30–33):

All repressions take place in early childhood; they are primitive defensive measures taken by the immature, feeble ego. In later years no fresh repressions are carried out; but the old ones persist, and their services continue to be made use of by the ego for mastering the instincts. New conflicts are disposed of by what we call ‘after-repression.’ (Freud, 1937c, p. 227)

That is, for Freud, one would not expect amnesia for any traumatic event unless there is a link to a primally repressed content. Freud further proposes a central role for psychological conflict (entailing fear and anxiety at the prospect of acting upon one’s own desires) as an essential condition for repression (see Freud, 1919g, p. 209), and, as noted earlier, Freud makes a distinction between repression and “normal fending off” of unpleasurable stimuli (Freud, 1936a, pp. 245–246).<sup>3</sup>

Additionally, as Grünbaum alludes to, Freud was fully aware of the apparent contradiction of behaviours that aimed to increase rather than avoid unpleasure (the so-called “economic” problem of masochism—Freud, 1924c). That some individuals nevertheless perform certain activities that appear “masochistic” may appear to present a theoretical challenge, but there is no logical problem with the proposal that pain itself might come to be rewarding, or that we may learn to forgo immediate gratification and endure states of unpleasure in the *belief* that we may possibly acquire other sources of gratification or avoid even greater suffering. For instance, an athlete might believe in the motto “no pain, no gain”, whereby pain signals a desirable event, or a triathlete’s “masochistic” painful endurance of running, swimming and cycling may be comprehensible in the context of a perceived greater goal. Accordingly, the psychoanalytic thinker will suspect in any such cases where a person performs apparently masochistic activities that there is precisely such “rewards”, which may or may not be consciously known to the individual involved. Consequently, Grünbaum’s criticisms of the motives of unpleasure and repression come to nothing.

However, Grünbaum’s criticism does indicate that the pleasure and reality principles require clarification. For Freud, the infant’s helplessness and inability to tolerate frustration in the face of an unsatisfied need creates a primary process hallucinatory reinvestment of previously learnt experiences of satisfaction (Freud, 1900a, p. 598). While

this temporarily silences the need, a *real* object or event is required for any actual gratification. The apparatus subsequently learns to inhibit reinvesting the mnemonic idea to the point of hallucinatory perception. Consequently, the infant learns to discern veridical from non-veridical experience through awareness of “indications of reality”, which determine whether the wished for object and situation is in fact real or not: “A new principle of mental functioning was thus introduced; what was presented in the mind was no longer what was agreeable but what was real, even if it happened to be disagreeable” (Freud, 1911b, p. 219). This introduces the “reality” principle, a reality-tempered modification of the primitive pleasure principle, where *actual* conditions of satisfaction and frustration are taken into account before initiating action:

Under the influence of the ego’s instincts of self-preservation, the pleasure principle is replaced by the *reality principle*. This latter principle does not abandon the intention of ultimately obtaining pleasure, but it nevertheless demands and carries into effect the postponement of satisfaction, the abandonment of a number of possibilities of gaining satisfaction and the temporary toleration of unpleasure as a step on the long indirect road to pleasure. (Freud, 1920g, p. 10, his italics; cf. 1900a, p. 601; 1915d, p. 120; 1925i, p. 127)

That is, the reality principle is simply an elaboration of the pleasure principle, and represents an enforced detour along the path to gratification. Nevertheless, what this all indicates is that attention to what is the case may easily be subverted, since pleasure and unpleasure remain as primary motivating stimuli.

*Pathological science, self-interest, and socially  
constructed blindness*

An example of where motivated ignoring may be subverting claims to objectivity is in the field of psychometrics. Psychometrics is the purported measurement of psychological attributes, such as mental abilities and personality traits. While scientific psychology generally considers measurement to be a *sine qua non* of science and objectivity, Joel Michell proposes that psychometrics provides an example of what he calls “pathological science” (Michell, 2000, 2008). Michell (2000) defines pathological science in terms of a two-level breakdown in the

processes of critical inquiry, analogous with pathology of individual cognition, whereby a person is not only in error but also prevented from recognising being in error. For example, given the relative scope of our sensory apparatus in relation to the universe, it appears that the sun revolves around the earth, giving rise to the *prima facie* plausible, yet mistaken, geocentric world view. However, as we know, such a view is erroneous, and through demonstration and argument the view can generally be corrected. In such instances, says Michell, error itself is not pathological, since it can be corrected when the relevant evidence is available. A pathological condition, however, follows if the correction of error is prevented by some relatively permanent condition “that not only interferes with the cognition of the facts of a certain class, but also hinders correction of these errors” (Michell, 2000, p. 640). For instance, politico-religious factors might prevent the relevant evidence from emerging, thus preventing the error from being recognised.

In the case of psychometrics, Michell (2000, 2008) argues that there is an uncritical acceptance of the belief that psychological attributes are quantitative. For any attribute to be quantitative (and hence possibly measurable) requires that it possess both ordinal and additive structure (see Michell, 1999, Chapter Three). Addressing whether any attribute possesses additive structure requires both careful conceptualisation and empirical tests before asserting that such attributes are quantitative. In psychometrics, however, this has clearly not occurred: there is simply the presumption that the psychological attributes of interest are quantifiable. However, while the presumption that attributes are quantitative is not, in itself, pathological (for instance, the belief may form a provisional hypothesis that proponents nevertheless recognise requires greater scrutiny), there are reasons to believe that the detection of error is being prevented: the vast majority of psychological researchers disregard the possibility that attributes are not in fact measurable and the possibility of error “is ignored or even disguised” (Michell, 2008, p. 12; cf. Michell, 2004b, p. 121).

In earlier writings Michell (1997) described this problem as one of psychometricians possessing “methodological thought disorder”: psychometricians displayed a sustained failure to observe the significance of the issue of quantity in relation to measurement. However, Michell believes that social factors are primarily responsible for this situation, guiding a certain course of enquiry and inhibiting others, and giving rise to what he describes as a “socially constructed blindness”.<sup>4</sup>

Michell (1997, 2008) cites social interests and systemic support for this pathology via a variety of factors, including textbooks endorsing an operational definition of measurement (a definition that ignores the issue of quantity), current teaching of psychometrics, which uncritically assumes that attributes are measurable, as well as a lack of career paths for anyone straying from the dominant research paradigm. Furthermore, various pressures—including limited funding resources and an apparent desire to be seen as a “real science” for legitimisation—make “measurement” a clearly desired goal. Consequently, these factors contribute to a discipline-wide ideological support structure, a “shared system of beliefs” (Michell, 1997, p. 374), which maintains the methodological status quo. The institution of psychology is, then, set up in such a way as to prevent questioning of the issue of measurement:

In the case of measurement in psychology this ideological support structure works to prevent psychologists from recognizing otherwise accessible methodological facts relevant to their research. This is not then a pathology of any individual psychologist. The pathology is in the social movement itself, i.e., within modern psychology. (Michell, 1997, p. 374)

However, while not denying that social factors are involved, individual psychometricians are themselves in an ongoing state of blindness about the facts of measurement. Here Michell introduces the possibility that, at the individual level, such blindness involves motivated ignoring and even self-deception. Insofar as the situation is maintained by individual researchers, Michell writes that “mainstream psychometricians have neglected to test the hypothesis that psychological attributes are quantitative, and ... *they attempt to disguise this fact*” (Michell, 2004b, p. 121, italics added; cf. Michell, 2000, p. 639; 2008, p. 10).

### *Pathological science and sustaining blindness*

How might repression and motivated ignoring help explain this state of affairs? To begin with, and before rushing to any psychodynamic explanation, it would probably be safe to say that the vast majority of psychological researchers would be ignorant of the issue of quantity and measurement simply because it does not receive any serious attention in the psychology curriculum, and so there is no need to posit motivation ignoring of self-deception in such cases. For example, Michell’s

own surveys demonstrate that psychology texts for the most part omit critical discussion of the issue (see Michell, 1997) and one can turn to any textbook of research methods and statistics to see that this is the case. For example, Gravetter and Forzano's (2012) psychology research methods textbook devotes an entire chapter to "measurement" but never actually discusses either the issue of quantity or defines measurement itself. Nevertheless, whether "accidental" or incidental ignorance is sufficient for explaining this state of affairs is another matter. While it is most likely the case that many in psychology are simply ignorant about what measurement entails, there are nevertheless individuals within psychology purportedly trained to think critically about scientific matters, any of which should be capable of cognising the "otherwise accessible methodological facts relevant to their research" (Michell, 1997, p. 374).

At first glance the case of pathological science and psychometrics could be understood simply as an instance of where the reality principle (observing the world as it is) is being subverted by wishful thinking ("*We believe what eases our minds, whether it is true or false*"—Anderson, 1934, p. 72, his italics). Psychometricians desire their data to be quantitative and simply uncritically believe that this obtains. This account of the wish-fulfilling character of the mind has been taken up (albeit implicitly) by Mele (2001) in his account of self-deception, and a discussion of Mele's account is instructive, since it both illuminates the key features of the problem as well as highlights limitations of Mele's cognitive explanation that Freud's account fills. For Mele (2001), standard "garden variety" cases of self-deception involve situations where a person falsely believes some state of affairs obtains when there is evidence to the contrary. For example, a person may believe that his or her partner is not having an affair when the evidence indicates otherwise. For Mele, the belief is held simply because this is what the person wishes to believe, and while this believing is motivated, there is no necessary implication that the person believes that not  $\neg p$  ( $\sim p$ ) and then comes to deceive him- or herself that  $p$  obtains.

Mele provides four examples of how desiring  $p$  can lead to the belief in  $p$  through misinterpreting relevant evidence either negatively or positively. For instance, a person desiring  $p$  may dismiss evidence for  $\neg p$  (e.g., an academic might use ad hominem attacks to discount a critic's argument) or even interpret evidence of  $\neg p$  as supporting  $p$  (e.g., the more that someone says "no", the more this is taken for

evidence of “yes”). Alternatively, a person may focus on confirmatory evidence via selective evidence-gathering while ignoring disconfirming evidence (confirmation bias). With respect to applying this within the context of psychometrics and pathological science, the conditions for self-deception appear to be even stronger because, as Michell observes, the institutional factors are such to take the issue of quantity and measurement as a given. Accordingly, the pathology of science within psychometrics could be explained simply in terms of wishful thinking, unobstructed by an intrusive reality.

However, some account is still required for how *disconfirmatory* evidence is ignored, especially in those cases where the scientist genuinely wishes to be objective towards the matter of enquiry. For example, a variety of responses to Michell’s work have, in fact, managed to ignore the issue of quantity, even when directly engaging with Michell’s work (e.g., Borsboom & Mellenbergh, 2004; see Michell, 2004b in reply). While wishful thinking may explain how confirmatory evidence is selected (which may be fairly simple: I desire that  $p$  and thus am sensitive to instances of  $p$  in the environment), ignoring otherwise available, disconfirmatory evidence requires some further explanation, because some other factor (or factors) is then required to explain how a reflective, critical mental act is prevented from occurring. Mele refers to this as *blindness* when he writes: “Selective evidence-gathering may be analysed as a combination of hypersensitivity to evidence (and sources of evidence) for the desired state of affairs and blindness—of which there are, of course, degrees—to contrary evidence (and sources thereof)” (p. 27). Such “blindness” is the issue at hand, then, that requires explanation. A person may believe that  $p$  because  $p$  is desired but then the question becomes one of how the person remains *blind* to evidence to the contrary.

One approach here could be to simply propose that we turn our attention from beliefs and evidence that cause us displeasure. This could be a simple, defensive response, premised upon Freud’s proposal that “psychical activity draws back from any event which might arouse displeasure” (Freud, 1911b, p. 219). Mele similarly writes: “Because favourable hypotheses are more pleasant to contemplate than unfavourable ones and tend to come more readily to mind, desiring that  $p$  increases the probability that one’s hypothesis testing will be focused on  $p$  rather than  $\sim p$ ” (p. 30). Here Mele offers three possible “sources” of biased belief (vividness of information, the availability heuristic,

and confirmation bias). However, the adequacy of these sources as explanations is questionable, simply because they appear to merely re-describe what is in need of explanation. For instance, “confirmation bias” is where “[p]eople testing a hypothesis tend to search ... more often for confirming than for disconfirming instances and to recognize the former more readily ...” (p. 29). Since this “tending to search for confirmation rather than disconfirmation” is what we are trying to explain, to then say that people attend to X rather than Y due to “confirmation bias” is simply a circular explanation.<sup>5</sup> Instead, what requires consideration is explaining *selective inattention*, whereby ignoring unpleasant facts cannot preclude the awareness of those same facts.

### *Varieties of selective inattention*

This is where recognising a series of repressive activities may contribute to understanding a variety of responses resulting in varieties of motivated ignoring. In some cases it may simply be that a subset of psychometricians recognise the veracity of Michell’s argument and simply “turn a blind eye” to it, because taking Michell’s argument seriously would lead to uncertainty and unpleasure associated with added difficulties. The use of Likert data in psychological research appears to provide an example of this. Likert data (numerical rating responses on a scale e.g., strongly disagree = 1 to strongly agree = 4) are generally recognised as providing ordinal rankings rather than interval or ratio scales required for measurement per se (e.g., Jamieson, 2004; Kuzon, Urbanek, & McCabe, 1996). Nonetheless, Likert data are extensively used with parametric tests that assume at least interval scales of measurement, and this situation appears to be recognised. For instance, McKenzie (2013) recently writes: “Many health-science researchers and clinicians use t-tests and other parametric tests on Likert scale data. This practice is not technically correct, but seems to be undertaken on the basis of tradition, especially in psychology” (p. 100). The likely situation here is that a sub-set of psychological researchers are aware that Likert data are not appropriate for the typically favoured parametric tests and are willing to turn a blind eye to the problem, because parametric tests yield greater chance of statistical significance compared to non-parametric tests (i.e., provide a more satisfying and less unpleasurable outcome).

While turning a blind eye might explain some cases, there is also the possibility of stronger cases of motivated ignoring. In such cases, an

individual might desire to be genuinely scientific about their research, but also feel pressured to perform in ways that subvert that scientific aim. As Michell notes, science occurs in a social setting where “conflicting social interests motivate science, and there is potential for pathologies to arise” (Michell, 2008, p. 8). Stronger cases of selective inattention could result from the individual’s conflicting aims (perhaps survival *vs.* superego demands), promoting ignorance of one outcome as compared to another. For instance, considering the social context of the science of psychology—including the pressure to publish or perish, and the publication-career relationship whereby career progression is related to publication outputs, research grants, etc.—it may not be surprising that any factor that provides a threat to research careers (i.e., survival) may be strongly defended against. In fact, if Michell is correct then the implications for current psychology include recognising that much of the discipline is built upon error; that much of current practice is at best play-acting science; that both teaching and research practice require revision; and that the apparent ease of current psychometric methods and statistical packages need to be replaced with a much more rigorous approach to the subject matter. In other words, what Michell is proposing is nothing less than a “paradigm shift” with its concomitant identity crisis for psychology.

It is thus hardly surprising that Michell’s thesis could be so threatening and anxiety-provoking that it makes psychometricians incapable of recognising what is in reality a simple fact regarding quantity and psychological attributes. Elad-Strenger (2013) has recently discussed existential crises associated with paradigm shifts within science invoked by the threat of change. She proposes that a researcher’s research worldview is associated both with security and self-esteem (and veritable immortality). Threats here to survival and narcissism are likely to invoke defensive responses. While Elad-Strenger’s analysis might not extend to all researchers (since one would expect differing degrees of investment in the discipline), the change that Michell is promoting fits the pattern that Elad-Strenger describes, since his conclusions threaten both the livelihoods and narcissistic investment for a variety of individuals. Threats to careers and threats to narcissism, together, mean that it could thus literally be the case, then, that a researcher wishes to be objective and rigorous about their enquiry—and even recognises the central importance and significance of Michell’s claims—but simply cannot come to acknowledge it (i.e., she/he suffers from the

blindness of the seeing eye). This is, in essence, a manifestation of the type of pathology that Freud describes in his paper on the resistances to advances in science.

### *Repression and the resistances to scientific progress*

While it may appear reasonable at this junction to produce procedures for identifying resistances in science, as Freud describes, the take-home message from this chapter is much simpler. Whatever your view of human nature, motivated ignoring occurs, and the history of human thinking demonstrates how wishful thinking, selective inattention, and distortion of evidence easily occur, and that objectivity is a hard-won achievement. One need only to look at the creationism/evolution debate to see how the motivated defence of beliefs contribute to maintaining ignorance (e.g., Satan planted fossils to mislead the faithful—see Gardner, 1957). In a similar fashion, then, to the possibility of cultural biases in research, any researcher concerned with objectivity would wish to keep in mind his or her own potential for motivated ignorance. Recognising the possibility of error and paying special attention to the means for both recognising and preventing error is what makes science superior as a method of enquiry (Michell, 2000, 2008; Petocz & Newbery, 2010). However, despite error-detection mechanisms, it is also clear that motivational factors might conspire to nevertheless create blind spots, preventing sensible enquiry in a variety of ways. For instance, a highly respected researcher might knowingly ignore evidence and arguments against his position for fear of loss of status, or an older academic may feel threatened by the arrival of a younger and more productive researcher (a threat to her social standing and narcissistic investment), prompting her to poison his name and keep others ignorant of his research, like the jealous queen in *Snow White*.

Accordingly, despite any question marks surrounding the possibility of repression, Freud's proposal of the resistances to scientific progress affords one of his greatest contributions to science, simply because it highlights the role of affects and the possibility that scientists may have motivated blind spots where attention is being prevented from critically evaluating certain situations. Acknowledging this possibility of bias has important pedagogical implications, since awareness of motivated biases could form part of research curricula aimed at fostering critical thinking (e.g., Michell, 2001; Petocz & Newbery, 2010). In

fact, scientists could be encouraged to become masochistic insofar as unpleasure and discontent with one's own theory could come to signal error, which allows for the potential for correction and revision. Rather, then, than seeing this proposal as an attack on scientific psychology, this discussion affords an opportunity for critical self-reflection, a practice that when at the heart of scientific enquiry provides the greatest possibility of progress.

However, it was also noted earlier that there is the matter of determining whether appeals to "resistance" are simply ad hominem responses to critics, aimed at subverting genuine critical claims. While this matter does not abrogate the possibility of emotive reactions that interfere with scientific enquiry, the issue of judging theories on their objective merit and avoiding ad hominem charges remains. Here we can simply restate the well-known principle that the motivation of the researcher is irrelevant to the truth or falsity of any claims made, and that, instead, the truth or falsity of claims is a matter of evidence and argument. Additionally, it is not being asserted that any negative reaction to a theory is an example of "resistance", as there may be sound reasons for such reactions (Hospers, 1959) and so, again, assessing any criticism of a theory is a matter of evidence and argument alone.

The foregoing should also not be taken to suggest that objectivity is not possible or that science is necessarily irrational as Kuhn (1962) proposes when he writes that in paradigm choice "there is no standard higher than the assent of the relevant community" (p. 94). While so-called "normal science" in Kuhn's view involves scientists solving "puzzles" but accepting the assumptions of the paradigm uncritically (as might describe current psychometric practice), there is no reason why this must necessarily be so, even if it describes observed trends in science. As Michell (2000) observes, "[t]here is nothing intrinsic to the concept of a paradigm that prevents critical enquiry into the truth of paradigms, no matter how difficult in practice" (p. 647). This being so, then, it is perfectly intelligible to ask what factors might be preventing critical engagement and here the resistances to science may be one of possibly many contributing factors.

### *Conclusion*

While the scientific merits of psychoanalysis still receive critical attention and the reality of repression is questioned, Freud's theory nevertheless contributes an essential consideration with respect to the potential

for motivated ignoring (resistance) in science. As the discussion of turning a blind eye and blindness of the seeing eye indicate, there are varieties of motivated ignoring, and while stronger cases of repression may be disputed, the possibility of motivated ignoring is nevertheless an essential consideration for any researcher. Scientists are not rational, computing machines but instead flesh and blood, desiring and affective creatures, who more or less attend to reality as a function of need. While we can become more attentive to the possibility of error, there is a pressing need for greater critical reflection upon motives and responses that may sustain ignorance. Here Freud's theory of repression, and his claim to resistance to scientific progress, constitutes one of Freud's greatest contributions to science, simply because scientists may have motivated blind spots where attention may be deflected from critically evaluating matters relevant to enquiry. While critics have attempted to undermine the possibility of repression, the importance of motivated ignoring in the psychology of science has itself been ignored. In fact, the significance of repression and motivated blindness extends beyond the realm of science and into the world of politics, business, and even debates concerning climate change (see Heffernan, 2011). Accordingly, the relevance of Freudian theory for science and greater society has never been clearer.