Freudian Repression, the Common View, and Pathological Science

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A sustained misconceptualisation of a theory leading to invalid applications and inferences indicates a failure in the scientific process. This has repeatedly occurred with Freud's theory of repression, a cornerstone of psychoanalytic theory. This paper traces the development of Freud's theory of repression and compares this with the "common view" found in mainstream psychology: the motivated forgetting of trauma. A fixation with Freud's original, and superseded theory (1893–1897) ignores the theoretical developments that constitute mature psychoanalysis (1900–1940), and has impacted upon attempts to test Freudian theory and the current "recovered memory" debate. Although certain accidental factors contribute to this misunderstanding, the sustained failure to comprehend Freudian repression reveals a breakdown in the process of critical inquiry. Implications for psychology as a whole are discussed.

Keywords: repression, mainstream psychology, recovered memories, Pathology of Science

Freud once wrote, "the essence of repression lies simply in turning something away, and keeping it at a distance, from the conscious" (Freud, 1915b, p. 147). This dynamic view of mentality, where some mental contents are denied access to conscious thought, became a fundamental tenet of psychoanalysis. Freud declared that the "theory of repression is the corner-stone on which the whole structure of psycho-analysis rests" (Freud, 1914a, p. 16). Furthermore, it "is possible to take repression as a center and bring all the elements of psycho-analytic theory into relation with it" (Freud, 1925b, p. 30). Subsequently, others have voiced similar views; repression has been described as "the keystone of psychoanalytic theory" (Holzman, 1962, p. 273), and "broadly defined, the concept of repression is at the heart of psychoanalytic theory" (Slavin, 1990, p. 308; Slavin & Grief, 1995, p. 140).

However, both psychoanalytic and nonpsychoanalytic thinkers have seriously questioned the scientific status of the concept. 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), while Bower

(1990) notes that "repression" fails to be mentioned in standard textbooks of cognitive psychology, having "been out of favor for some time" (p. 209; cf. Loftus & Ketcham. 1995, p. 49). Since the theory has also purportedly failed to receive experimental support (e.g., Holmes, 1990; Anderson, 1995; Brandon, Boakes, Glaser & Green, 1998) it may appear justified to consign Freudian repression to the historical waste bin. However, there are reasons to believe that the concept of Freudian repression is not well understood within mainstream psychology, and that this indicates a significant breakdown in the scientific process. The present paper traces the development of Freud's theory of repression and demonstrates that the important changes in the theory of repression have not been sufficiently appreciated in mainstream psychology, leading to confusion in at least two domains: so-called experimental tests of repression, and the domain of "recovered memory" syndrome. There is reason to believe that the sustained failure to accurately cognise Freudian repression indicates a "pathology of science" (Michell, 2000), involving a persistent breakdown in the process of critical inquiry.

Freud's Early Theory of Repression

The term "repressed" (verdrängt) appears for the first time in Breuer and Freud's Preliminary

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Communication (1893, in Breuer & Freud, 1895). Here, "traumatic" memories are inaccessible due to motivated forgetting: "...it was a question of things which the patient wished to forget, and therefore intentionally repressed from his conscious thought and inhibited and suppressed" (Breuer & Freud, 1895, p. 10). Repression here is defensive, a "fending off" preventing "incompatible ideas" that arouse unpleasure (such as shame, self-reproach or psychical pain) from association with conscious thinking (Freud, in Breuer & Freud, 1895, p. 157). The motivation for this is premised upon Freud's postulated general motivating principle forming the basis of both normal and pathological behavior. He writes in the posthumously published Project for a Scientific Psychology (1895): "The nervous system has the most decided inclination to a flight from pain" (Freud, 1895, p. 307, his italics), and in a draft sent to his friend Wilhelm Fliess (Draft K, enclosed in a letter dated January 1, 1896), he writes: "there is a normal trend toward defense—that is, an aversion to directing psychic energy in such a way that unpleasure results" (Freud in Masson, 1985, p. 163). Repression here is comparable to a withdrawal from painful stimuli and acts to minimize the immediate distress following "psychical traumas" (Freud in Breuer & Freud, 1895, p. 116). Here Breuer and Freud were initially nonspecific concerning the nature of the trauma: "[a]ny experience which calls up distressing affects—such as those of fright, anxiety, shame or physical pain—may operate as a trauma of this kind" (Breuer & Freud, 1895, pp. 6). Here any unpleasurable experience could be traumatic, and no distinction is made regarding either the cause or intensity of unpleasure.

The "Return of the Repressed": The Seduction Hypothesis and Diphasic Repression

The focus in Breuer and Freud's *Studies on Hysteria* (1895) was upon repression of traumatic memories of events occurring during adult life. Freud, however, subsequently came to believe that adult neuroses could be traced to childhood sexual experiences. This led him to formulate between 1895 and 1897 what has come to be known as the seduction hypothesis, where a necessary condition for later repressions of sexuality in adulthood is a sexual se-

duction during childhood (Freud, 1896a; 1896b):

"Repression" of the memory of a distressing sexual experience which occurs in maturer years is only possible for those in whom that experience can activate the memory-trace of a trauma in childhood. (Freud, 1896b, p. 166; cf. pp. 197, 199)

The model of repression here posits two distinct stages separated by puberty, the first stage acting as a foundation for the second. In the first stage the sexually immature child is the victim of an actual sexual seduction, either by an adult or another child, and since the child is sexually immature such experiences are not assimilated but persist as "unconscious memories" (Freud, 1896c, p. 211). Alone these were not considered pathogenic but became so if the memory of seduction was revived after puberty: "it is not the [seduction] experiences themselves which act traumatically but their later revival as a memory after the subject has entered sexual maturity" (Freud, 1896b, p. 164). Since puberty increases the capacity for sexual reaction, the memories from infantile sexual experiences behave then as current events after their rearousal, and the feelings and associated memories subsequently become compulsive and incapable of normal inhibition (Freud, 1896b).

This early scheme is summarized by Freud (1896b): (a) an early sexual seduction during sexual immaturity leads to unassimilated "unconscious memories"; (b) at sexual maturation self-reproaches become attached to the *memory* of the seduction; (c) both memory and selfreproach are repressed and replaced by primary symptoms of defense, typically conscientiousness, shame, and self-distrust; (d) there is a period of apparent health (successful defense), until finally; (e) illness proper "characterized by the return of the repressed memories—that is, therefore, by the failure of defense" (p. 169). In this scheme it is the memory of the seduction that is targeted by defense and for adult repression to occur an "incompatible idea" must have some (logical or associative) connection with the "unconscious memories" of the seduction experience (Freud, 1896c, p. 211).

Rejection of the Seduction Hypothesis

In a letter to Fliess dated September 21, 1897, Freud recanted his seduction hypothesis (Freud

in Masson, 1985), based on an appreciation of the role of phantasy in mental life. The reports of seduction were now seen as imaginative falsifications or "screen memories" (Freud, 1899), implying that the targets of repression were no longer painful memories per se but rather desires, impulses, and their associated phantasies:

[An] important piece of insight tells me that the psychical structures which, in hysteria, are affected by repression are not in reality memories—since no one indulges in mnemic activity without a motive—but *impulses*... (Freud in Masson, 1985, p. 239, his italics, letter to Fliess dated May 2, 1897)

This shift is reflected in Freud's letters to Fliess where he begins to write of the "repression of impulses" (Freud in Masson, 1985, p. 252; p. 255, Letters dated May 31, 1897 and July 7, 1897), and Freud's descriptions of the mind's dynamics now increasingly relied on terms such as forces, currents and urges, terms that he appears to use interchangeably, and all reflecting a greater appreciation of endogenous motivational factors. The mind is now pictured as an economy of competing motives attempting to find equilibrium (Freud, 1905b, p. 135), described variously as a "volition. . . opposed by a countervolition" (Freud, 1900, p. 337), a conflict between "opposing tendencies" (Freud, 1909b, p. 192; cf. 1905d, p. 267), and a "complication of motives" (Freud, 1905a, p. 60). On the other hand neurotic symptoms are compromises "between two mental currents" (Freud, 1906, pp. 276–7) or "two opposing impulses" (Freud, 1909b, p. 192), the outcome determined by the relative strength of the impulses and their ability to dominate one another (Freud, 1905b, p. 135; 1910a, p. 50).

The emphasis upon endogenous motivational factors contributes to a theory of repression with an entirely different emphasis to that of the seduction theory. Repression is no longer simply about forgetting painful memories, but instead reflects motivational conflict and the inhibition of "instincts" (Freud, 1915b). "Instinct" itself is translated from *Trieb* that approximates "drive" although there is no single English equivalent. Freud's editor Strachey translated this as "instinct," but given this term's association with "unmodifiable or stereotyped speciesspecific behavior patterns" (Boag, 2006, p. 10; cf. Laplanche & Pontalis, 1973; Ritvo & Solnit, 1995) Trieb is better translated as "instinctual drive," where "instinctual" referring here to a biological or innate foundation, rather than to a "stereotyped" or "unmodifiable" character, and "drive" referring to an "impelling" factor, since *Trieb* has "overtones suggestive of pressure" (Laplanche & Pontalis, cf. Maze, 1983; Zepf, 2001). These instinctual drives operate as endogenous stimuli ("needs"), which, rather than stimulation from without, persist until an activity or action is performed leading to satisfaction—that is, the removal of the stimulus (Freud, 1895, pp. 296–7; 1905c, p. 168; 1915a, p. 118–9; 1933, p. 96).

In relation to instinctual drives, the primary target in Freud's mature theory of repression here is the wishful impulse, the ideational representative of the drive (Freud, 1900, p. 604; 1915b, p. 152). In Freud's view, wishes act instrumentally, informing the organism about appropriate actions to satisfy the drive state via reinvoking memories of satisfying experiences (Freud, 1900, p. 598). Repression occurs when a wish is believed to lead to both satisfaction and frustration. Psychical conflict ensues:

An impulse or urge is present which seeks to release pleasure from a particular source and, if it were allowed free play, would release it. Besides this, another urge is present which works against the generation of pleasure—inhibits it, that is, or suppresses it. (Freud, 1905b, p. 135)

Repression operates by inhibiting (i.e., preventing knowledge of) the necessary guiding belief of the behavior believed to lead to frustration. As a result, the behavior that would lead to the feared satisfying experience is also inhibited: "The rejection of the idea from the conscious is, however, obstinately maintained, because it entails abstention from action, a motor fettering of the impulse" (Freud, 1915b, p. 157, his italics). After repression, the frustrated drive remains in varying states of activation (Freud, 1915b, p. 151), in part mediated through substitute (secondary) satisfactions (Freud, 1910b, p. 148; 1912, p. 236; 1915b, p. 149; 1939, p. 116), which typically take the form of substitutive phantasies (Freud, 1907, p. 58). These substitutive aims form the targets of repression proper (eigentliche Verdrängung) or afterpressure (*Nachdrängen*) (Freud, 1915b, p. 148). Hence, although memories are affected by repression, this is incidental to the targeting of endogenous motivational factors. It is not simply that bad experiences are forgotten, but rather, memories of satisfaction (i.e., good experiences), also believed to lead to danger, which become targeted. This understanding of repression gives further rise to a distinction between psychoneuroses, Freud's main area of interest, and traumatic neuroses. The former involve the repression of instinctual demands premised on conflict, while with the latter, traumatic memories are forgotten, arising from "shocking" experiences such as war, severe accidents, or sexual abuse, independent of conflict: "...the war neuroses are only traumatic neuroses, which, as we know, occur in peacetime too after frightening experiences or severe accidents, without any reference to a conflict in the ego" (Freud, 1919, p. 209, italics added).

Primal Repression and Repression Proper

In a letter from Freud to Ferenczi dated December 6, 1910 (in Jones, 1955, p. 499), and published soon after in the Schreber case study (Freud, 1911), Freud outlines an account of repression similar to that proposed in his earlier seduction theory. Here repression consists of three stages: fixation, repression-proper (or afterpressure), and the return of the repressed. He develops a similar account in the metapsychological paper Repression (1915b, p. 148), with the notable difference that the first phase is described as primal repression. In both accounts, primary repression (fixation/primal repression) results in the formation of a nucleus of unconscious ideas; secondary repression (repression proper) targets either mental derivatives of the primary repressed material, or those sharing associative connection with it. The final phase constitutes the failure of repression and resulting neurosis (return of the repressed). Significantly all adult neuroses presuppose primary repressions, continuing the theme of the seduction theory, where an infantile repression was a necessary factor for later neurosis (e.g., Freud. 1896b, p. 166; 1937, p. 227).

Freud appears to have posited two accounts for the motivation of primal repression. One account refers to instinctual impulses that are too intense and threaten to overwhelm the organism (Freud, 1926, p. 94; 1933, p. 94), and although this account is accepted by many (e.g., Madison, 1961; Frank & Muslin, 1967; Jaffe, 1991), it has certain explanatory limitations since it does not address why overstimulation and nongratification occur typically only with

sexual and aggressive impulses, and not in cases of instinctual needs such as hunger. In fact, Freud appears to rule out nongratification as motivating repression when he writes, "repression does not arise in cases where the tension produced by lack of satisfaction of an instinctual impulse is raised to an unbearable degree" (Freud, 1915b, p. 147). Freud's alternative account claims that primal repression occurs when the satisfaction of a drive is believed to also entail some external danger: "...an instinctual demand is, after all, not dangerous in itself; it only becomes so inasmuch as it entails a real external danger, the danger of castration" (Freud, 1926, p. 126). Similarly, "the instinctual situation which is feared goes back ultimately to an external danger situation" (Freud, 1933, p. 89; cf. 1914b, p. 96; 1940, p. 275). The major source of danger is externally situated in the form of parental injunctions: "[Repression] can almost never be achieved without the additional help of upbringing, of parental influence... which restricts the ego's activity by prohibitions and punishments, and encourages or compels the setting-up of repression" (Freud, 1940, p. 185). The Oedipus complex provides an illustration of this variety; the young boy believes possessing his mother would be desirable, but the unpleasure at the prospect of castration outweighs this, motivating repression of the libidinal desire (Freud, 1908, 1909a, 1924b, 1909a, 1924b). Whether this Oedipal situation actually occurs is ultimately an empirical question and not the issue here. The important point for conceptualizing Freud's theory is that rather than simply responding to painful stimuli as with reflex-defense (such as occurs when a hand is put on a hot stove), the unpleasure motivating repression involves cognitive appraisal and anticipation of future punishing consequences, rather than simply avoiding unpleasant memories (cf. Maze & Henry, 1996).

The Id, Ego, and Superego

The introduction of the id, ego, and superego (Freud, 1923) extended this emphasis on instinctual targets. The pool of instinctual desires, the id (*das Es*), primarily concerned with gratification without regard to external constraints or possible consequences (Freud, 1940, p. 148), was inhibited by the ego (*das Ich*), which is concerned with taking reality into account and

safety (Freud, 1940, p. 199). Although the nature of the ego needs careful consideration (see Maze, 1987), its mediating role highlights the inhibitory nature of repression targeting instinctual impulses. Consider the following:

As a result of the experience, an instinctual demand arises which calls for satisfaction. The ego refuses that satisfaction, either because it is paralyzed by the magnitude of the demand or because it recognizes it as a danger. . . The ego fends off the danger by the process of repression. The instinctual impulse is in some way inhibited, its precipitating cause, with its attendant perceptions and ideas, is forgotten. (Freud, 1939, p. 128)

Additionally, the superego, possibly better translated as "Over-I" or "Upper-I" given the German Über-Ich (Bettelheim, 1983, p. 58), contributes another important dimension to repression. Ultimately based upon fear of punishment from social sources, the superego is "the representative...of every moral restriction" (Freud, 1933, p. 67), and this has a major influence on repression. The young ego is said to identify with the punishing source, and this internalisation of social values subsequently guides the ego as a type of constant reminder that certain actions lead to unfavourable consequences (Freud, 1924a, p. 150). Subsequently, violations of moral beliefs, and the unconscious fear of punishment, provide the incentive for repression of offending impulses (Freud, 1923, p. 52; 1924a, p. 151), supplementing the earlier account of primary and secondary repression. With primary repression impulses are inhibited due to a fear of external threat, while secondary repression follows from the internalized fear of punishment acting as a constant reminder of the threat of punishment: "Thenceforward the ego, before putting to work the instinctual satisfaction demanded by the id, has to take into account not merely the dangers of the external world but also the objections of the superego, and it will have all the more grounds for abstaining from satisfying the instinct" (Freud, 1939, pp. 116–7). Accordingly, the developmental trajectory of repression can be conceived as follows: (a) the ego anticipates danger resulting from socially proscribed desires; (b) this fear motivates repression of the offending desires (primary repression); (c) this is achieved, in part, through internalising/identifying with the punishing source; (d) this, in turn, establishes an internalisation of the external fear (the

superego) motivating secondary repression of associated offending material.

Freudian Repression and the Common View

As is clear from the preceding, Freud's mature account of repression emphasizes several components that must necessarily be considered when discussing Freudian repression: (a) repression primarily targets "wishes" (the ideational representative of instinctual drives), whose satisfaction is believed to lead to danger; (b) repression acts to inhibit the offending wish, preventing it from being known and acted upon, and; (c) the primary stage of repression (primal repression) occurs during childhood when the child is psychologically vulnerable but capable of anticipating consequences of actions; (d) later repressions are premised on primal repression and motivated by moral injunctions. In particular, the point that repression entails psychical conflict and provides "protection... against instinctual demands" (Freud, 1926, p. 164) is necessary for understanding Freudian repression.

It is not uncommon, however, to find that none of these details are taken into account when discussing Freudian repression. A brief survey of undergraduate introductory texts of psychology illustrates this point. The definition of Freudian repression provided by Carlson, Martin and Buskist (2004) reads: "The mind's active attempt to prevent memories of traumatic experiences from reaching conscious awareness" (p. 600). Here repression targets traumatic memories rather than instinctual impulses, reminiscent of Freud's superseded seduction theory. Similar examples are not uncommon. Matlin (1999), for instance, proposes the following example of Freudian repression: "A rape victim cannot recall the details of the attack" (p. 421). Similarly, Barker (2002) writes, as an example of Freudian repression: "You forget instances of childhood abuse" (p. 499). Gray (2002) also discusses repression from the position of painful memories, providing a personal anecdote where a young boy was incapable of recalling a knife attack on his father (p. 597). Although some introductory textbooks do portray a more accurate presentation of Freudian repression (e.g., Walker, Burnham & Borland, 1994; Gleitman, Fridlund & Reisberg, 1999), there is a

clear trend to conceptualize Freudian repression in terms of memories, without reference to either wishes, conflict, or primary and secondary repression.

In fact, the view that Freudian repression targets traumatic memories is not restricted to introductory texts and is frequent enough to be described as the 'common view.' Baddeley (1999), in his book, Essentials of Human Memory, devotes a chapter to Freudian repression, and writes, "Sigmund Freud introduced the concept of repression, whereby retrieval of painful memories is actively avoided" (p. 143). Similarly, too, Howard (1995) writes: "Freud held that the prime reason for neurosis is traumatic experiences, memories of which have been repressed but which nevertheless continue to affect behavior" (p. 80). While Freud may have initially introduced this concept (which is itself disputable), it is not reflective of his later view, and no indication is given that this is appreciated. Furthermore, such instances are not isolated (e.g., Roediger & Guynn, 1996, p. 228; Anderson, 1995, p. 265), and Kihlstrom's (1997) discussion of the 'return of the repressed' is entirely focused on the return of repressed memories ("What Freud called the return of the repressed we now call implicit memory" p. 110, italics in original). Such an understanding is not limited to academic psychology either. The definition used by the Royal College of Psychiatrists' Working group on Reported Recovered Memories of Child Sexual Abuse (Brandon, Boakes, Glaser & Green, 1998), defines repression as follows: "A Freudian concept, repression is said to occur when a memory is actively kept out of consciousness because it is unacceptable to the conscious mind, to which its admission would generate anxiety" (p. 298). Here the emphasis again is on the repression of 'memories', and the specifics of the Freudian account are omitted.

If it were simply a case of Freud's writings being unclear than such a misattribution would be understandable. However, it appears to be more than simply this. Consider the manner in which authors have presented Freud's views from the commonly cited paper *Repression* (Freud, 1915b). Henderson (1999), for example, attributes to Freud (1915b), the view that "emotionally unpleasant or otherwise highly charged memories. . . are repressed by the conscious mind into the unconscious" (p. 76). Similarly,

Schooler and Hyman, Jr. (1997), (again citing Freud (1915b) as their source), write: "Repression theory argues that when people experience trauma they are likely to place that memory in the unconscious until the anxiety is sufficiently relieved" (p. 536). However, in the cited paper Freud says nothing of the sort. He does not mention "memory" once, instead clearly referring to "the repression of an instinctual representative" (Freud, 1915b, p. 152). Nevertheless, attributing to Freud's (1915b) paper the claim that repression targets memories of traumatic childhood experiences is not uncommon (see also Loftus & Ketcham, 1994; Goodman, Quas, Batterman-Faunce, Riddlesberger & Kuhn, 1996; Conway, 2001), which raises the question of how such a gross misunderstanding could occur. However, before addressing this issue of causality, the present paper now draws attention to the impact of this misunderstanding. As would be expected, an invalid understanding of a theory will lead to invalid applications and inferences. The impact of the "common view" upon two domains in psychology, experimental tests of repression and the recovered memory controversy, will now be discussed.

Experimental Tests of Freudian Repression and Recovered Memories

The experimental field has purportedly failed to find evidence of Freudian repression. For example, after surveying 60 to 70 years of research concerning repression Holmes (1990, 1994) concludes that investigators have been unable to demonstrate repression in the laboratory, and what does appear to support it can be given alternative explanation (such as conscious suppression). At the same time, he writes that although the "definition of 'repression' is of course essential to studying the phenomenon" (1990, p. 85):

in the absence of an authoritative definition, we should use the definition held by most individuals. This may be heretical, but exactly what Freud did or did not mean by the term "repression" may be irrelevant now anyway. (Holmes, 1990, p. 86)

If Holmes is not concerned with Freudian repression then this should be made clear. However, Holmes is clearly casting aspersions as to whether Freudian repression has any experimental support since he cites Freud and claims

that he is discussing "repression proper" (secondary repression), even if failing to recognize that secondary repression is premised on primary repression. In fact, the definition of repression invoked here is "the selective forgetting of materials that cause the individual pain" (Holmes, 1990, p. 86), the common view again, and he equates this with the Freudian account:

Sigmund Freud, who introduced the concept of repression into psychological theory, used it differently at various times, but it is now usually defined as the involuntary selective removal from consciousness of anxiety-provoking memories. . . For Freud it was a major defense mechanism of the ego, a cornerstone of psychoanalytic theory. (Holmes, 1994, pp. 4)

Although Holmes is aware that Freud's views developed, he is clearly equating the "common view" with Freudian repression and claiming that evidence against the "common view" is evidence against Freud's view of repression. The subsequent lack of laboratory support for the "common view" is cited as evidence against Freud's theory of repression (Holmes, 1990, 1994; cf. Bower, 1990; Anderson, 1995; Crews, 1995; Thornton, 1999; Kihlstrom, 2002). Therefore, concludes Holmes, "it seems reasonable to question whether continued expenditure of effort on this topic is justified" (1990, p. 99). Holmes is partly correct here, since invalid tests of theories do not warrant further effort, and attempting to test Freudian repression without reference to the necessary elements of the theory is doing exactly this. The validity of these supposed tests of Freudian repression is legitimately disputed since such tests have little or no bearing on the actual Freudian conception, a point noted by earlier authors (cf. Madison, 1961; Geisler, 1985). This is not to claim that the tests are of no value whatsoever with respect to the common view. They may well be, but mistakenly believing that these are tests of Freudian repression constitutes a gross scientific error.

The lack of appreciation for the fundamental postulates of instinctual drives and conflict has also meant that Freud's concept of repression has become enmeshed with the recovered memories debate, at times with enormous clinical and legal ramifications. For example, claims of recovered memories of previously repressed sexual abuse have drawn legal battles and in one case served as a basis of conviction of murder (Spiegel & Scheflin, 1994). Here, like the experimental literature, repression is commonly conceptualized as the common view. For exam-

ple, a critic of the recovered memory syndrome, Loftus, writes:

According to the theory, something happens that is so shocking that the mind grabs hold of the memory and pushes it underground, into some inaccessible corner of the unconscious. (Loftus, 1993, p. 518)

Again, the emphasis is on the memory of traumatic events and ignores Freud's later claim that repression mainly operates on phantasies and wishes rather than actual memories of prior (sexual) experiences. However, both critics of psychoanalysis and advocates of recovered memories have ignored Freud's distinction. Although many authors have attempted to correct this misconceptualisation (e.g., Davies, 1996; Mollon, 1996; Fonagy & Target, 1997; Sandler & Sandler, 1997; Oliner, 2000), the subsequent debate concerning recovered memories occurs within a misconceived framework at times attributed to Freud (e.g., Loftus, 1993; Loftus & Ketcham, 1994; Pendergrast, 1995; Crews, 1995; Freyd, 1996; Reviere, 1996; Mac Vicar, 1997; Brandon, Boakes, Glaser & Green, 1998). As with the experimental literature, findings suggesting that traumatic events are actually remembered are said to disconfirm Freudian repression (Loftus, 1993; Brandon et al., 1998; Thornton, 1999), and these criticisms have been subsequently cross-fertilized by the laboratory research cited earlier, allowing authors such as Holmes (1990) to state, with the approval of Loftus (1993):

I think that our current regulations concerning "truth in packaging" and "protective product warnings" should be extended to the concept of repression. The use of the concept might be preceded by some such statement as, "Warning: The concept of repression has not been validated with experimental research and its use may be hazardous to the accurate interpretation of clinical behavior." (Holmes, 1990, p. 97)

However, it is clear that given Freud's theoretical modifications both the experimental literature and critics of recovered memory syndrome accounts are attacking a "straw man," if they intend to apply such conclusions to Freud's mature theory of repression.

Does This Indicate a Pathology of Science?

Given that Freud's writings are accessible and that such gross misunderstandings are en-

demic within the literature, then the question arises as to why exactly this is occurring. There are reasons to suspect that this indicates a major breakdown in the scientific process. Michell (2000) defines a pathology of science in terms of a breakdown in the processes of critical inquiry, which he treats as analogous to a pathology of individual cognition. This is more than merely being in error. As cognisors we are commonly in error about our understanding of the world. 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 erroneous, geocentric worldview. However, as we now 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 circumstances allow. A pathological condition, however, follows if the correction of error is prevented by some relatively permanent condition: "A pathology of cognition is error caused by a special factor: a relatively permanent condition . . . that not only interferes with the cognition of the facts of a certain class, but also hinders correction of these errors" (p. 640). As is well known from history, for example, certain institutions resisted the correction of the geocentric world view, contrary to all reasonable evidence. If a situation analogous to this is occurring and contributing to the misunderstanding of Freudian repression then this indicates an example of pathological science.

It is clear that certain accidental circumstances have contributed to the error in understanding Freudian repression. The problem of translating Freud's work into English is undoubtedly a factor here (see Bettelheim, 1983), although this alone is insufficient to account for such a gross misunderstanding since the present paper has detailed the Freudian account based on the available translations. However, as others have rightly noted, Freud is not always consistent (Madison, 1956), and Geisler (1985) points out that the "difficulties in deciphering Freud's work" and "problems in the theoretical presentation of the concept of repression led to misinterpretations in its translation into a laboratory setting" (p. 254). More problematic still, writes Madison (1961), "Freud's own writings do not anywhere contain an adequate account of the

theory of repression to which an investigator might turn in designing his study, or an evaluator in seeking to appraise the results of such studies" (p. 6). There is certainly a valid point here. Freud's writings are at times ambiguous and his use of metaphor and analogy when describing the mind's workings is notoriously open to diverse interpretation. However, it would be a mistake to claim that a coherent account of repression cannot emerge, given the fact that Madison (1961) and Geisler (1985) have themselves managed to present an accurate portrayal of Freudian theory, and even if the theory is gray in areas (as the earlier discussion of primary and secondary repression indicates), there are still some relatively salient points, crucial points, that should be easily understood. For example, repression targets "instinctual impulses" (Freud, 1915b, p. 146). Furthermore, there are other accessible secondary sources to which the would-be experimenter of Freudian theory could turn to. The seminal work by Laplanche and Pontalis (1973), for example, provides an extremely accurate account of psychoanalytic terminology, as well as addressing significant changes in the theory. This does not mean that testing the Freudian theory of repression in the laboratory is easy or even necessarily possible, given the ethical constraints involved with manipulating impulse-fear associations in young children. Such difficulties do not, however, justify misrepresenting the theory and drawing invalid inferences from experimental tests, such as has occurred to date with the common view.

Moreover, it can be demonstrated that the source of the confusion is not simply due to Freud himself. As is clear from the earlier discussion, authors will erroneously quote Freud's works, as seen with his paper Repression (1915b). Numerous authors attribute to Freud's paper Repression (1915b) the claim that repression targets memories of traumatic childhood experiences (e.g., Loftus & Ketcham, 1994; Goodman, Quas, Batterman-Faunce, Riddlesberger & Kuhn, 1996; Schooler and Hyman, Jr., 1997; Henderson, 1999; Conway, 2001). However, the term *memory* does not occur there once, whereas the term *instinct* occurs 17 times, instinctual representative 12 times, and instinctual impulse 7 times. One can only guess that the paper was selected for citation based on its title alone, rather than its content. Otherwise, it

is interesting to consider how these authors must have understood the opening lines of that same paper: "One of the vicissitudes an instinctual impulse may undergo is to meet with resistances, which seek to make it inoperative. Under certain conditions . . . the impulse then passes into the state of 'repression'" (Freud, 1915b, p. 146). Moreover, it is not as if Freud restricted his discussion of repression in these terms to a single paper. One wonders how authors attributing the common view to Freud would understand the following quote:

In the course of things it happens again and again that individual instincts or parts of instincts turn out to be incompatible in their aims or demands with the remaining ones, which are able to combine into the inclusive unity of the ego. The former are then split off from this unity by the process of repression, held back at lower levels of psychical development and cut off, to begin with, from the possibility of satisfaction. (Freud, 1920, p. 11)

Furthermore, there is evidence that the common view misunderstanding of Freudian repression is insensitive to correction. For example, in Crews' contribution to The Memory Wars, he includes a quote from psychoanalytic writers pointing out that Freud's developed theory of repression targeted endogenous motivational impulses (whereas some contemporary writers discuss dissociation, rather than repression, as the defense targeting traumatic memories). However, the crucial conceptual point concerning the targets of repression is left untouched by Crews; Crews continues his discussion of Freudian repression with respect to memories, citing mostly pre1898 texts from Freud's abandoned seduction hypothesis era, or at times using post1898 texts as if to reflect Freud's later view, when in fact such texts refer to Freud discussing his early psychoanalytic ideas (e.g., see Crews' referral to Freud, 1910a, p. 217). In fact, this fixation with Freud's early theory is quite pronounced. In the Royal College's report (Brandon et al., 1998) cited earlier, the authors at one point acknowledge that "Freud later repudiated his early theory of incest" (p. 302), yet use only three sources of Freud's theory, all written prior to 1897. What this indicates is that Freud's early writings (1895–1897), which he repudiated, has managed to eclipse the majority of his theoretical work (1900–1940), despite repeated attempts to correct this misunderstanding of Freudian repression (e.g., Madison, 1961;

Geisler, 1985; Fonagy & Target, 1997; Sandler & Sandler, 1997). It appears then that there is a fixation to attributing a particular view to Freud, which has become entrenched, institutionalized and insensitive to correction, and displaying the characteristics of a pathology of science of the type discussed earlier.

Because this situation involves social and psychological processes this in itself is a very interesting phenomenon for the psychologist to investigate. Undoubtedly many factors contribute here, including less than rigorous research methods, although many of the researchers implicated here appear to also display the qualities of strict scientific methodology in other areas of their research. One possible explanation for the lack of scientific rigor with respect to Freud's theory here is that there may be a general attitude that Freudian theory is unscientific anyway (cf. Popper, 1963), which allows researchers to feel that they do not have to seriously engage the material. For instance Henderson (1999) writes of Freud's theory of repression: "As with most of Freud's theories, however plausible it may seem, this notion is speculative and therefore unverifiable" (p. 76). Aside from the fact that such a claim is premised on an adequate understanding the theory, which this paper demonstrates has not sufficiently occurred, such a view may permit researchers to feel that they do not need to devote rigorous scientific attention to the theory, and thus contributing to the sustained misrepresentation of Freudian repression. On the other hand, it is also possible that this sustained error does in fact represent a psychological resistance to psychoanalysis, as Freud predicted would occur (Freud, 1925a). It has been noted that mere association with Freud's name is enough for some critics to reject psychoanalytic concepts (Westen, 1999, p. 1095), and as Cramer (1998) notes: "[An] intense aversion to that theory [psychoanalysis] by many has resulted in a need to indiscriminately dismiss all of its concepts" (p. 882). Whether this is in fact the case is an empirical question, one that is, in fact, testable (e.g., randomly assigning Freud and Einstein's name to propositions and asking subjects to rate their plausibility). Whatever the causes though, there is undoubtedly a scientific pathology occurring, and this situation damages the claim of psychology to be a rigorous, disciplined scientific enterprise.

What Can We Learn from This?

Although this article is concerned primarily with Freudian repression, the general claim to be extracted from this is that as psychologists, the conceptual groundwork for attempting to discuss and test theories cannot be neglected, since to do so leads to confusion and error. Accordingly, for modern psychology progress it must embrace the conceptual task of coherently formulating theories and hypotheses, as well as appreciating historical changes within theories, before attempting to test or apply them. As Michell (2000) notes, the logically prior task before attempting to test theories is to coherently formulate them to permit deriving hypotheses that provide valid test of the theory and allow valid inferences from the results of observation and experimentation to be made. It is clear from the earlier discussion that the scientific process has broken down here with respect to discussing and testing Freudian repression. Since Freud's theory of repression has been misconceptualised, subsequent application of the theory to experimental tests and discussions of recovered memory syndrome has been invalid, resulting in confusion and scientific error. The solution to this problem is relatively simple, at least in principle. Any theory needs to be accurately formulated which requires understanding the theory as a whole, and spelling out the particular terms involved in the theory and how they stand vis-à-vis one another. This further involves assessing the logical coherency of the theory through conceptual analysis, prior to submitting the theory to observational tests (cf. Michell, 2000). If psychology operates in this manner it will certainly accelerate both its basic understanding of its field of study, as well as being capable of more effectively identifying avenues for testing and assessing the theories in auestion.

So what future directions could there be for testing Freudian repression? On the earlier analysis it is clear that Freud is discussing a variety of cognitive and behavioral inhibition. Such terms are commonly found in modern experimental psychology, although rarely equated with the Freudian account (for an exception, however, see Friedman & Miyake, 2004). Arguably the most promising avenue here for testing Freudian repression is in terms of neural mechanisms and their effects on behavior.

Freud had very early on provided a neurological account of repression, "described generally as inhibition," operating by a mechanism of sidecathexis (Freud, 1895, p. 323, his italics). The specific neural mechanism posited by Freud is not supported by the evidence (see McCarley, 1998), although providing an account of repression in terms of neural inhibition is not implausible given evidence of selective inhibitory processes and mechanisms (see Houghton & Tipper, 1996; Clark, 1996; Redgrave, Prescott & Gurney, 1999; Brass, Derrfuss, von Cramon, 2005; Fox, Henderson, Marshall, Nichols & Ghera, 2005), and the emerging field of neuropsychoanalysis promises to address exactly these issues (see, e.g., Kaplan-Solms & Solms, 2000). However, as noted above, to test Freud's, or any other theorist's, claim, requires a coherent conceptualization of the theory first. In the case of Freudian repression this task may first involve undoing pathological processes affecting the scientific task. This paper is one step toward this, making conscious what is most likely an unconscious process involved in a case of pathological science.

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