Towards a post-Freudian theory of repression: Reflections on the role of inhibitory functions

SCHMIDT, Ralph Erich, VAN DER LINDEN, Martial

Abstract

Although Freud's merits may be readily acknowledged in the year of his 150th birthday, recent findings on repression-related phenomena cannot be accommodated by his classic conception, on which Erdelyi's theory is built. This point is illustrated by discussing the role of inhibitory processes. The unified theory of repression should be elaborated to generate falsifiable predictions on the reported phenomena.


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From repression and attention to culture and automaticity

Amir Raz* and Horacio Fabrega, Jr**
*Vancouver Coastal Health Research Institute and University of British Columbia, VGH Research Pavilion, Vancouver, British Columbia, V6H 3Z6, Canada; **University of Pittsburgh, Department of Psychiatry, Pittsburgh, PA 15216.
DrAmirRaz@gmail.com hfabregajr@adPhilia.net

Abstract: Erdelyi grants “repression” emotional and cognitive qualities that can modulate consciousness and probably overlap with what is typically attributed to “attention.” Such a broad appellation of repression explains virtually all behavior and lacks specificity. Repression and attention elucidate behavior in different clinical, cognitive, and cultural contexts. Refining these influences, we identify a few lacunae in Erdelyi’s account.

Erdelyi competently threads through the clinical and experimental literature, expanding and redefining “repression” so as to uphold Freud and question post-Freudian psychoanalysis. Repression is placed on and straddles the conscious–nonconscious continuum; all “defense mechanisms” are subsumed as “elaborative” mechanisms. Erdelyi’s repression presupposes several mental faculties (e.g., self awareness, reasoning, language, and memory) and engulfs too many behaviors; that is, it lacks specificity.

It is unclear why repression should be defined as consciousness-lowering; even Erdelyi’s own analysis construes it as consciousness-feeding or consciousness-regulating. Similar to the operationalization of attention, repression implies that significant information (e.g., stimuli and memories) is selected and deployed to reach a goal in the context of motivational, emotional imperatives. Indeed, both attention – especially when construed as an organ system (Posner & Fan, in press) – and repression subservce overlapping functions. And yet, they appear to differ in a specific context: Whereas repression is an ulterior psychopathological notion, researchers have unraveled a great deal about theories, mechanisms, and typologies of attention in healthy as well as pathological populations (Raz & Buhle 2006).

Attention is a strong regulator of cognition, emotion, and action. In the present context, we speak of executive attention, which goes by many names including supervisory, selective, conflict resolution, and focused attention. This form of attention relates to self-regulation (i.e., the ability to manipulate one’s own emotions, thoughts, or actions upon direction from the self or another person), emotional-regulation (i.e., the reduction, increase, or sustaining of an emotional response such as fear, anger, or pleasure based upon the actions of the self or others),1 effortful control (i.e., the ability to inhibit, activate, or sustain a response, which includes the capacity to inhibit a dominant response in order to perform a subdominant response), and inhibitory control (i.e., the reduction in the probability, speed, or vigor of the normal response to a stimulus based upon instruction from the self or others). Both repression and attention help explain similar cognitive phenomena. However, one caveat of Erdelyi’s model is that it fails to address cognitive influences such as automaticity and culture. A unified theory of repression and attention should help explain not only psychopathology (e.g., defense against unconscious) but also phenomena such as trance, “dissociated” behavior, hypnosis, and other culture-bound syndromes of psychiatric interest. Indeed, clinical psychiatry, medical anthropology, and the social history of medicine document that such phenomena represent human universals (Fabrega 1975; 1997). These accounts describe observable syndromes of behavior that are culturally constructed and appear standardized, if not largely automated, yet subject to different externally viewed interpretation (Simons & Hughes 1985).

Cognitive psychologists generally agree that mental processes come in two forms: automatic and controlled and that automatic processes are either innate automatic, or become automatized through extensive practice (Shiffrin & Schneider 1977; Spelke et al. 1976). Erdelyi’s variant of repression seems automatic in this sense. However, some individuals (e.g., highly suggestible people) can “un-ring the bell” and regain control over something that’s been automatized (Raz et al. 2006). The literature offers little or no discussion of this issue, leaving the question unanswered and mostly unasked, although certain meditative disciplines describe achieving the “de-automatization” of thought and at least a few reports support such accounts (Alexander et al. 1989; Dillbeck 1982; Wenk-Sormaz 2005). Erdelyi provides but a glimpse into the relationship of repression to automaticity and stops short of contextualizing how gaining control over an automatic process may relate to repression. Such treatment is sorely missing from his account.

Culture is expectation-driven behavior, and products of “enchanted” reside in brain networks that influence processes such as awareness, memory, and action. As a pool of information, culture allows individuals to shape behavior and habit patterns and informs as to what is acceptable and normative. As it evolved, it set the stage on which individuals could jointly work out their circumstances in a personal and group-centered way (Fabrega 2002). Culture influences how attention and repression function in a context of competing impulses, values, and goals toward adaptive behavior (Raz et al. 2005). Culturally encoded information influences much of what psychiatric disorders produce in observable behavior (Fabrega 1975). Similar to individual and genetic variations (Fan et al. 2003; Mayr et al. 2005), culture is also wired into the brain, and the neural manifestations of disparate cultures likely correlate with different neural patterns. For example, bilingual individuals can assume different roles as a function of environmental cues, and bilingual persons can report feeling like a different person depending on the language they use. Thus, personality can change as a function of language and culture, including historical periods and mentalities, suggesting that personality is perhaps more malleable, and culture more influential, than is commonly held. Although powerful cultural signals can be offset by awareness and experience, the contextual nature of personality is of importance in a world that is increasingly multicultural and multilingual.

In the context of conflict resolution and conflict monitoring (Bush et al. 2000), one would expect attention, repression, or another suitable behavior-regulating mechanism to explain processing items of information over brief time. However, it should also help explain the larger whole producing extended syndromes of symbolically meaningful and observable behavior that include regulation and coordination of mental material and deployment of motor components (Garro 2001).

In unified context, repression, attention, and culture are useful to the extent that their mechanisms and effects are identifiable and measurable. Attention is well within this scope: repression and culture less so. However, the concept of repression seems to serve a heuristic purpose because researchers can use it to make predictions concerning new studies. Although it is unclear whether Erdelyi’s theory is falsifiable in the Popperian sense, a brief glance into the history of science shows that multiple theories were not falsifiable initially, not because they were not sufficiently well operationalized in terms of measurable variables (e.g., in Freudian theories), but because they were not fully developed. We hope that Erdelyi’s account will be extended and revised to permit more testable predictions as additional research is conducted using new methodologies.

NOTE

1. Emotion regulation can be a form of self-regulation but it could also be induced by the actions of others.

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Ralph E. Schmidt and Martial Van der Linden
Department of Psychology, University of Geneva, Geneva, 1205, Switzerland.
Ralph.Schmidt@pse.unige.ch Martial.Vanderlinden@pse.unige.ch
Commentary/Erdelyi: The unified theory of repression

Abstract: Although Freud’s merits may be readily acknowledged in the year of his 150th birthday, recent findings on repression-related phenomena cannot be accommodated by his classic conception on which Erdelyi’s theory is built. This point is illustrated by discussing the role of inhibitory processes. The unified theory of repression should be elaborated to generate falsifiable predictions on the reported phenomena.

Although we welcome Erdelyi’s endeavor to integrate insights from different clinical and laboratory traditions into a unified theory of repression, we consider that the framework he proposes should be elaborated in ways that lead beyond Freud’s classic conception. Building on Freud’s distinction between repression in the narrow sense and repression in the widest sense (Freud 1937/1964), Erdelyi proposes that repression is divided into two subclasses, inhibitory (or simple) repression and elaborative repression. He affirms that these two subclasses of “consciousness-lowering processes” are “extensively buttressed by the experimental literature.” Inhibition consists on the mental level in “cognitive avoidance (not-thinking)” or “subtract[ion of] attentional allocation” that results in “degrading the ‘signal’” (sect. 3.1). For the underlying mechanisms, a parallel is drawn between inhibition and the functioning of inhibitory circuits in the brain.

Appealing as it may appear with its neural Nimbus, the concept of inhibition is far from being unanimously accepted in cognitive psychology: in fact, it has been seriously challenged from different sides. The most fundamental challenge has come from authors who have gone so far as to question the “right of existence” of this concept; they propose that experimental effects generally attributed to inhibition are amenable to alternative explanations. MacLeod et al. (2003), for example, offer such “inhibition-free explanations” for results typically obtained with the directed forgetting (DF) and the retrieval-induced forgetting (RIF) paradigms. MacLeod et al. mention, among the candidate mechanisms that may replace inhibition, selective rehearsal (for DF) and retrieval strategy disruption (for RIF). Erdelyi invokes the results typically obtained with these paradigms as evidence in support of the notion of inhibitory repression; at the same time, he surmises that mechanisms such as selective rehearsal and selective search might also be tapped by these tasks. In this respect, his theory must be qualified as underdetermined: It specifies neither the conditions in which the different mechanisms are called upon, nor their possible interaction, nor the reasons that an inhibition-involving account is superior to an inhibition-free account.

In a similar vein, the literature on thought suppression (for a review, see Wenzlaff & Wegner 2000) that Erdelyi briefly mentions suggests that mental control may be modeled without recourse to the concept of inhibition. The leading theoretical account in this field, Wegener’s ironic process theory (Wegner 1994), posits an interaction between an effortful intentional operating process that seeks distractors (thoughts other than the to-be-suppressed target) and a less effortful ironic monitoring process that watches for intrusions of the target in order to alert the first process of the need to renew distractions. The post-suppression rebound of the target is explained by the fact that when the operating process is voluntarily relinquished or disrupted by cognitive demands (or resource depletion as during sleep; Schmidt & Gendolla 2006; Wegner et al. 2004), the monitoring process continues its vigilance for unwanted thoughts, thereby enhancing their activation. By this view, suppression implies a mechanism of selective attention, but not necessarily one of inhibition (for a similar position, see Engle 2000).

Another challenge for inhibition has come from studies showing that this concept rests on a fragile empirical foundation. For example, Salthouse et al. (2006) have recently examined six tasks that are often interpreted in terms of inhibition-related memory control; among them were, again, DF and RIF tasks. Analysis of the relations between the variables derived from these tasks did not yield any significant sign of convergent validity for one or more memory-control constructs. Even though this finding may be ascribed to the poor reliability of the memory-control measures used, it constitutes a serious challenge to any inhibition-related repression account. Investigations of the neural substrates of inhibition have not produced unequivocal evidence for this mechanism either. For example, Collette et al. (2005) conducted a study using positron emission tomography to explore the cerebral areas associated with three executive functions: updating, shifting, and inhibition. Although some regional activation patterns were common to all three functions, only a weak inhibition-specific activation was found in the right inferior frontal region. This finding may again fuel doubts as to the validity of the inhibition construct.

Critical comments about the concept of inhibition have also been made by authors who generally adhere to it; they suggest that inhibition should be conceived of as a multidimensional construct rather than as a unitary one. Friedman and Miyake (2004), for example, examined the relations between three inhibition-related functions. They found that prepotent response inhibition and resistance to distractor interference were closely related and that both were unrelated to resistance to proactive interference. In a structural equation model, these investigators combined prepotent response inhibition and resistance to distractor interference into a single latent variable and observed that it was related to everyday cognitive failures; unwanted intrusive thoughts, on the other hand, were related to resistance to proactive interference. This result highlights the interest of establishing a taxonomy of inhibition-related functions – a theoretical refinement that lacks in the unified theory of repression. Erdelyi conjectures that repression “knocks out declarative (conscious) memories” and may affect nondeclarative representations (e.g., procedural ones) in a different way, but he does not take the step of distinguishing two or more different inhibitory functions. Whether unwanted intrusive thoughts or everyday cognitive failures (slips according to the Freudian terminology) are concerned, the inhibitory mechanism acting upon them is thus thought to be the same.

In light of the reported findings and theoretical accounts, we suggest that the unified theory of repression should be elaborated to be more specific about the implication of inhibitory processes. First, it should be made clear whether the term inhibition refers to a mental operation (“not-thinking of something?”) or to a cognitive mechanism that is supposed to explain behavior; this distinction is not always neatly drawn in Erdelyi’s article. Second, if a cognitive mechanism of inhibition is postulated, arguments for the superiority of such an account over an inhibition-free account of repression should be provided. And third, the concept of cognitive inhibition should be broken down in terms of separable functions. It is our belief that these suggestions could lead to the generation of novel, testable, and thereby falsifiable hypotheses about repression.

Repression and dreaming: An open empirical question

Michael Schredl

Sleep laboratory, Central Institute of Mental Health, J5, 68159 Mannheim, Germany.

Schredl@zi-mannheim.de www.dreamresearch.de

Abstract: From the perspective of modern dream research, Freud’s hypotheses regarding repression and dreaming are difficult to evaluate. Several studies indicate that it is possible to study these topics empirically, but it needs a lot more empirical evidence, at least in the area of dream research, before arriving at a unified theory of repression.

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