BOOK REVIEWS

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AN INVITATION TO READERS

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Recently, we attended a conference on the self-control of thought and emotion. In the course of a talk on this topic, Dan Wegner asked us to close our eyes and to try not to think of a white bear. It was hard. Actually, it was impossible. The more willfully we tried to avoid thinking this thought, the more persistently images of white bears emerged into consciousness. We tried to think distracting thoughts about, for example, hobbies. One of us imagined playing the banjo—but soon a white bear was singing along. The other envisioned sailing across the Chesapeake Bay, only to find that a white bear was at the helm.

After we had tried, quite unsuccessfully, to suppress thoughts of a white bear for a few minutes, Wegner invited us to think this thought if we wished. And we did so, obsessively. It was as if thoughts of a white bear had been accumulating in cerebral cell bodies and had suddenly been released into the synapses. For the remainder of the conference, the white bear was a constant companion to us all; it appeared in our dreams, on t-shirts in store

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If a distinctive thought is used as a way of actively completing a sentence in an untaught thought,
ontogeny of distinct thought will rescue the sentence. However, only work on thought that is consciously
in the mind. When a sentence about a declarative level thought is recognized, how can we recognize what goes on
in the mind? We can do this by looking at the consciousness of the other.

If thought cannot be controlled by thought suppression, how can we recognize what goes on
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The bear and other...
the distracting thought becomes associated with the unwanted thought and can later serve to bring it to mind again. When many distractors are used to prevent a thought, countless cues are thereby established to assure that the thought cannot be avoided. Everything soon reminds a compulsive hand washer that his hands are dirty. Similarly, the psychologists who attended the conference mentioned earlier came to cue for each other the thought of a white bear (which is something of a problem; conversations among them have become rather boring).

Wegner's treatment of the consequences of thought suppression could not be more timely. Warnings against the suppression of thought have flooded the theoretical and popular literatures for years (Freud's catharsis hypothesis, and the popular Gestalt and primal scream therapies are examples). In the last decade, investigators have converged on the notion that the suppression of negative emotions and cognitive reactions to traumatic events may have health-damaging consequences. This idea was demonstrated by Pennebaker who asked subjects to confess secret traumas into a tape recorder and found that subsequently they reported fewer illnesses than other subjects who had not done so [2]. Inadequate emotional expression has also been associated with poorer cancer prognosis [3]. And an interest in the measurement alexithymia, the inability to express emotions verbally, has grown rapidly among researchers concerned with psychosomatic illness [4].

This is a fine volume, and one to be read by social scientists and lay people alike, especially in a society obsessed with thought control. There is an important lesson here, beyond the fascinating psychology, concerning the creation of recurrent thoughts by first labeling them as unwanted or deviant. As a society, we seem to enjoy labeling more and more thoughts as unwanted (from thoughts about eating high cholesterol foods, to fantasies about victimless counternormative activities between consenting adults, to the idea that school children can avoid becoming drug addicts by just saying [and thinking] "no"). But by labeling such thoughts as unwanted and rewarding attempts to suppress them, the objects of such thoughts may evolve into national obsessions, resulting in incapacitating ruminations, unproductive guilt, and antisocial behavior. Free thinking, on the other hand, may encourage rational and prosocial choices, an idea on which those who would prefer to regulate the hearts and minds of others should cogitate.

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claim that computer software merely comprises symbolic rules for functioning as if in parallel with human mental processes. This perspective, however, does not adequately address the unique nature of human cognition, which is fundamentally different from that of machines.

The central argument of the book is that consciousness is not a simple, unified state but rather an emergent property of complex brain processes. The authors argue that consciousness arises from the interactions of various brain regions, each contributing to different aspects of the conscious experience.

The book is divided into several chapters, each focusing on a different aspect of consciousness. The first chapter introduces the concept of consciousness and sets the stage for the subsequent discussions. Subsequent chapters delve into specific areas, such as the role of attention, the neurobiological basis of consciousness, and the relationship between consciousness and the brain's neural networks.

Throughout the book, the authors draw on a wide range of scientific disciplines, including neuroscience, psychology, and philosophy, to provide a comprehensive understanding of consciousness. They also engage with the latest research findings, offering a fresh perspective on long-standing questions in the field.

In conclusion, the book offers a thought-provoking exploration of the complex and dynamic nature of consciousness. It is a valuable resource for anyone interested in the philosophical and scientific aspects of this fundamental human experience.
meaningfully comprehends symbols. Van Gulick’s defense is, essentially, the functionalist position that semantic meaning in computers and brains derives from internal ‘functional dispositions’—not from external ‘behavioral dispositions,’ as animal behaviorists suppose, and not from subjective qualities of neural hardware, as mind-brain identity theorists like Searle suppose.

Like Churchland’s philosophical chapter on unself-conscious dreams, the four physiological chapters by Weiskrantz, Gazzaniga, Bisiach, and Kinsbourne address the definition of and localization of self-consciousness. Weiskrantz describes cortically blind patients who behaviorally exhibit the ability to discriminate visual stimuli, but who reportedly have no self-consciousness of seeing such stimuli. Furthermore, Weiskrantz shows that this reported absence of self-consciousness cannot be attributed to reporting criteria, as posited by signal detection theorists like Holender [5]. Gazzaniga describes split-brain patients whose experience of ‘self’ is connected (at the subcortical level) both with left-hemisphere emotion and with right-hemisphere emotion, but is connected (at the cortical level) only with left-hemisphere cognition. In interpreting such evidence, Gazzaniga claims that a self-monitoring process resides in the left hemisphere and serves to integrate right-hemisphere affect with left-hemisphere cognition and affect. Bisiach, in the third physiological chapter, rejects Gazzaniga’s identification of self-consciousness with a unitary monitoring system in the left hemisphere. Instead, Bisiach argues that different sensory modalities are connected to different monitoring systems, systems which are neurally manifested throughout both hemispheres but are subjectively experienced as a unitary self. And in the fourth physiological chapter, Kinsbourne challenges Gazzaniga’s and Bisiach’s assumption that self-consciousness involves focused attending, scanning, or monitoring. He proposes, in lieu of such attentional processes, that “cognitive masking” [6] or “[psychoneural] differentiation [resulting from] a high degree of inhibitory surround” (p. 244) promotes the emergence of conscious sensations, and that a consciously differentiated self-concept produces the illusion of an ‘inner person’ attending to those sensations.

Finally, like Van Gulick’s philosophical discussion of functionalism, the eight chapters by cognitive psychologists discuss whether conscious experience corresponds to software functioning or to neural hardware. The three chapters by Shallice, Umlita, and Oatley defend a scientifically popular but philosophically weak form of functionalism; the three chapters by Johnson-Laird, Allport, and Gregory argue for functionalism in its strongest form; and the two chapters by Marcel and Erdelyi argue against it.

For Shallice, the computer metaphor for mind is a sufficient scientific metaphor, because computer functioning “has properties isomorphic with those of consciousness” (p. 309). Consistent with Shallice’s ‘scientific functionalism,’ Umlita uses the “executive system” as a general metaphor for understanding the subjective difference between voluntarily executed goals and automatically processed subgoals. Also consistent with this philosophically weak form of functionalism, Oatley uses the self-modifying program HACKER [7] as a specific analogy for understanding the difference between consciously represented intentions for self-modification and syntactic rules for such modification.

For Johnson-Laird, the computer metaphor for mind is not only sufficient scientifically, but also necessary philosophically. Thus, Johnson-Laird starts off his chapter as a scientific functionalist might, and metaphorically equates self-consciousness with a recursive program that monitors itself. But at the conclusion of his chapter, he boldly states that “[because] no one has yet succeeded in refuting the thesis that any explicit description of [human information processing] is computable, . . . the computer is the last metaphor for
experience does not philosophical any closer to understanding consciousness and so on, but in the present book, the complete metaphor for mind, as subjective—

Experience differs from philosophical psychology. In this case, the metaphor for mind, as subjective—

[Image 0x0 to 612x396]

Overtly, these two summarize actions on (conversational) causal efficacy, and select-consciousness:

 phenomenological experience of pain is a necessary condition for the knowledge of damage. Only the process whose damaged physical state has a subjective pain is the same damage-experiencing behavior of the organism that flows with the subjective qualities of pain. According to the concept of pain, the neuron with the subjective quality of pain can only do those functions where or do those functions where damage-experiencing behavior of the organism that flows with the subjective qualities of pain is the same damage-experiencing behavior of the organism that flows with the subjective qualities of pain. A simple, thought experiment, because both are necessary to cause certain effects of pain. A simple, thought experiment, because both are necessary for this reason. Moreover, the possibility of consciousness of pain and the neural understanding of pain to focus on both the subjective and objective functions of pain could be well understood. Propositions of consciousness of pain and objective functions of pain could be well understood.

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functions. The greatest causal efficacy, above and beyond any causal effects of understanding.

chapter notes, added from body damage or emotional injury, in the present book, the complete metaphor for mind, as subjective—

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Rather the subjective perspectives of Marcel and Erdelyi and the psychoneural perspectives of Churchland, Weiskrantz, Gazzaniga, Bisiach, and Kinsbourne bring us closer to such an understanding.

REFERENCES


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The trick is in what we emphasize. We either make ourselves miserable or we make ourselves strong. The amount of work is the same.

Carlos Castenada

Mindfulness is thought-provoking, integrative, and most importantly, filled with practical suggestions for educators, parents, clinicians, organizational specialists, health care professionals, and social scientists. Langer's suggestions for becoming mindful—and for avoiding mindlessness—are widely applicable, and in this book Langer carefully explores the implications of mindful and mindless behavior. A few questions stimulated by Mindfulness are discussed below, along with several directions Langer may want to consider in her future work and parallels with other theories which deserve attention. As will soon be apparent, the important message of this review is that Langer is on to something of wide-ranging relevance.
Cogulation involves a fundamental and mental human function, as when the mind, according to the principle of the posterior side of the human brain, is involved in a process where the mind is engaged in a decision-making process. However, the choice of option comes in recognizing explicitly the positive side of human cognition. We have to choose between two options in a decision-making process, and we make this judgment to choose which is the most appropriate—whether we choose the left or the right. In this process, the mind is involved in making a decision.

Sir Frederick Banting, in his book, "Lazarus, the Mind," emphasizes the importance of the mind in decision-making. He states that the mind is the primary organ of decision-making, and that the mind is the key to decision-making. Banting also states that the mind is the primary organ of decision-making, and that the mind is the key to decision-making.

Consider the specificity of a decision—such as "poliolescence," the state of "poliolescence," in the information that is presented. This is the specificity of the information, and it is the specificity of the information that is presented. This is the specificity of the information, and it is the specificity of the information that is presented.

Similarly, very few of us are visually affected.

More important principles can be seen between cognitive theories of mindlessness, progress, and advances, as discussed by Professor A. B. Kapphan.
activity.” I would feel better if she went into more detail about the benefits of categorizing. Categories are used for a number of reasons, but primarily because they make life easier (Bruner, Goodnow, and Austin, 1956; Radford and Burton, 1974). As Radford and Burton put it, categorizing “reduces the need for constant learning,” “provides direction for instrumental activity,” and “is essential for abstract thinking” (1974, p. 16).

A very similar argument comes to mind when noting the parallel between acting from a single perspective and egocentric behavior (Elkind, 1967; Piaget, 1970). Like the reliance on a single perspective, egocentricism often leads individuals into difficult situations. However, some types of egocentricism reflect healthy and efficient cognitive skills. The psychological egocentricism of adolescents, for example, arises because formal operators develop the ability to think about hypothetical things—including “imaginary audiences” (Elkind, 1967).

Granted, it is useful to study errors, including mindless actions, because they can help us to better understand error-free behavior. Researchers study illusions to better understand perceptual tendencies (Gregory, 1978; Neisser, 1976); cognitivists study heuristics to understand sound reasoning (Nisbett and Ross, 1980); psychoanalysts study neuroses to better understand the healthy personality (Gedo, in press); and psycholinguists study verbal slips to grasp normal verbal processes (Motley, 1986). The problem is one of generalization. Freud helped us understand psychosis; but his theory may not entirely apply to the normal population.

PERSONAL CONTROL

Langer’s ideas about mindfulness fit well with several other recent theories. For example, the premise of personal control is very compatible with Rubenson’s (in press; Rubenson and Runco, 1990) theory of active investments in creative potential; Scarr and McCartney’s (1983) theory of evocative genotype-environment interactions; and Davidson and Sternberg’s (1984) theory about the selective encoding, combination, and comparison of information. In each case, the emphasis is on the active role of individuals in guiding their own behavior. Langer’s theory also bares a striking resemblance to Carlos Castenada’s (e.g., 1974, 1987) anthropological and philosophical view about personal control. Consider the following excerpt:

An alternate view of the world... one that recognizes how much of our reality is socially constructed, may actually afford more personal control. (Langer, 1989, p. 31).

Now consider the quotation from Castenada presented at the beginning of this review. Langer and Castenada both argue that individuals benefit from utilizing personal control. And they both argue that individuals can readily obtain personal control, but rarely recognize the need or opportunity.

EDUCATION AND HEALTH

Although several recent theories parallel Langer’s, not one is as practical. For example, Langer argues that the way information is stored—mindlessly or mindfully—influences the way it is retrieved and used. This has obvious educational implications, many of which are detailed in Mindfulness, and by Langer, Hatem, Joss, and Howell (1989)—and using
KEY QUALITIES OF MINDFULNESS

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of personal control. Here again it is clear that a crucial premise of mindfulness is that
This may be necessary some of the time, but when we do it, the other individuals may
not appreciate it. It is often the case that well-meaning professionals, especially when
under pressure, tend to be too critical of what we do. The key to success is to
remember that we are responsible for our own actions and decisions. We have to
remember to do what we believe is best for ourselves and others. This is not
always easy, but it is essential. The key is to be aware of our own actions and
decisions and to act accordingly.

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individuals are sensitive to new information, and as a result recognize subtle differences between objects, persons, and points of view. Simply put, they are capable of fine discriminations. As a result, they are more empathetic, and have a wider range of available responses.

Consider our judging the intelligence of an individual in the automobile next to us as we drive on the freeway. If we see him or her commit an illegal or hazardous maneuver (e.g., changing lanes without signalling) we might assume that he or she is lacking in intelligence. However, in doing so we would be both focusing on one outcome—the illegal maneuver—and ignoring the existence of other points of view. From the other driver’s point of view, the illegal maneuver may have been necessary—to avoid hitting a pedestrian (not visible to the observer in the other car) or spilling scalding coffee on an infant in the passenger seat. An observer would be mindful if he or she recognized that other points of view are possible (cf. Jones and Nisbett, 1972) and discriminated between apparent and truly inconsiderate or inane behavior.

Because mindful individuals are perceptive, sensitive to information, and have a wide range of options, they tend to be flexible and independent in their thinking. They also have the potential to be creative. Indeed, Langer asserts that “many, if not all, of the qualities that make up a mindful attitude are characteristic of creative people” (p. 115). Many creative individuals are open-minded, flexible, and generally self-actualized (Runco, 1990a). However, many individuals have these traits but do not perform in a creative fashion. For this reason, the traits are probably best viewed as correlates. Mindfulness may also be a correlate, without a causal tie to creativity.

Langer does not recognize one of the primary tenets of current theories of creativity, namely, that there are important differences among various domains and endeavors (e.g., art vs. science). In some instances, this does not hurt her case (e.g., “those who can free themselves of old mindsets . . . who can open themselves to new information and surprise, play with perspective and context, and focus on process rather than outcome, are likely to be creative, whether they are scientists, artists, or cooks”) (italics added, p. 115). Elsewhere, I believe it does hurt (e.g., “. . . a respect for intuition and for the information that may come to us in unexplainable ways is an important part of any creative activity”) (p. 119, italics added). Some creative individuals appreciate intuition and similar phenomena (MacKinnon, 1978; Shaw, in press), but I would not generalize to everyone or all domains of creative activity.

Langer’s assertion that “thinking by analogy is equally important to both mindfulness and creativity” (p. 130) also has dubious generality—unless she is suggesting that analogical thinking is only moderately important in both. Analogy and metaphor might be important for some types of creativity and important in some domains (Perkins, 1981), but creativity is not entirely dependent upon analogical thinking. In some domains, analogical thinking may be unimportant for creative performance. And there are other modes of creative thought.

Langer’s ideas about the work place are much more convincing, and very practical. Innovation engineers will certainly appreciate this section of Mindfulness. I again have a concern about domains, for Langer wrote: “The ability to shift contexts may be just as valuable to a manager or on the assembly line as is to an artist or physicist” (p. 133). On the other hand, Langer presents a compelling argument when she wrote that mindful people “use the phenomenon of second wind to their own advantage in a more deliberate way . . . staggering different kinds of paperwork, changing to a different work setting, and taking a
There are a few minor differences in mindfulness. For example, although this book is

Altered States of Consciousness

Mindfulness and mindlessness are opposites, not merely "different". Instead, a state of consciousness is similar to the

On several occasions, Langer seemed to be using new terminology to describe

Concluding Remarks

By increasing discrimination, problems of discrimination. When this is the case, the solution is simple: decrease prejudice

"Innovation and decrease, "pom-pom!"

"The degree of uncertainty" (p. 149), and allow playfulness. In other words, this will increase

Langer's statement (1984, 1988) is, I may also allow the newcomer to their identity in this sense, this is a type of "enquiry".

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Langer was writing in a way that would be the most convincing, and catch our attention. Perhaps she exaggerated intentionally, to insure that readers would be mindful.

She may have had the same objective when she wrote that “when we are tormented by unwanted emotions, we assume it could be no other way” (p. 176). This may be true some of the time, but other times we may be tormented because we know and could be another way. Something more desirable may be within the realm of possibility, or at least conceivable, but beyond our reach. This is one reason that the personal control can be taken too far: Realistically, some things are beyond our control.

Langer acknowledged that her focus in this book was on the implications of mindfulness and mindlessness. This is important to keep in mind when reading the book. She does not attempt to add much to her theory—presented in a variety of articles and chapters—but scholars familiar with her work may still enjoy Mindfulness. Unlike short journal articles, implications are explored, and a great deal of ground is covered. Using Langer’s own terms, this book can quite easily facilitate the mindfulness of its readers. I hope in her future work Langer will continue to explore the connections between mindfulness and parallel theories, and continue to investigate mindful phenomena.

**BIBLIOGRAPHY**


