

POWER OF SUBCONSCIOUS MIND

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Introduction

The unconscious mind is still viewed by many psychological scientists as the shadow of a “real” conscious mind, though there now exists substantial evidence that the unconscious is not identifiably less flexible, complex, controlling, deliberative, or action-oriented than is its counterpart. This “conscious-centric” bias is due in part to the operational definition within cognitive psychology that equates unconscious with

subliminal. We review the evidence challenging this restricted view of the unconscious emerging from contemporary social cognition research, which has traditionally defined the unconscious in terms of its unintentional nature; this research has demonstrated the existence of several independent unconscious behavioral guidance systems: perceptual, evaluative, and motivational. From this

perspective, it is concluded that in both phylogeny and ontogeny, actions of an unconscious mind precede the arrival of a conscious mind—that action precedes reflection.

Contemporary perspectives on the unconscious mind are remarkably varied. In cognitive psychology, unconscious information processing has been equated with subliminal information processing, which raises the question, “How good is the mind at extracting meaning from stimuli of which one is not consciously aware?” (e.g., [Greenwald, Klinger, & Schuh, 1995](#)). Because subliminal-strength stimuli are relatively weak and of low intensity by definition, the mental processes they drive are necessarily minimal and unsophisticated, and so these studies have led to the conclusion that the powers of the unconscious mind are limited and that the

unconscious is rather “dumb” ([Loftus & Klinger, 1992](#)).

Social psychology has approached the unconscious from a different angle. There, the traditional focus has been on mental processes of which the individual is unaware, not on stimuli of which one is unaware (e.g., [Nisbett & Wilson, 1977](#)). Over the past 30 years, there has been much research on the extent to which people are aware of the important influences on their judgments and decisions and of the reasons for their behavior. This research, in contrast with the cognitive psychology tradition, has led to the view that the unconscious mind is a pervasive, powerful influence over such higher mental processes (see review in [Bargh, 2006](#)).

he aid of consciousness ([Loftus & Klinger, 1992](#)). (Note that while the unconscious may be “dumb” in regard to subliminal stimuli, it’s still smarter than consciousness, which can’t even tell that such stimuli have been presented!) The issue contributors concluded, for the most part, that although concept activation and primitive associative learning could occur unconsciously, anything complex requiring flexible responding, integration of stimuli, or higher mental processes could not.

However, the term *unconscious* originally had a different meaning. The earliest use of the term in the early 1800s referred to hypnotically induced behavior in which the hypnotized subject was not aware of the causes and reasons for his or her behavior ([Goldsmith, 1934](#)). In *On the Origin of Species*, [Darwin \(1859\)](#) used the term to refer to “unconscious selection” processes in nature and contrasted them with the intentional and deliberate selection long engaged in by farmers and animal breeders to develop better strains of corn, fatter cows, and woollier sheep. Freud, who credited the early hypnosis research with the original discovery of the unconscious

(see [Brill, 1938](#)), also used the term to refer to behavior and ideation that was not consciously intended or caused—for example, “Freudian slips” and nearly all the examples given in *The Psychopathology of Everyday Life* involve unintended behavior, the source or cause of which was unknown to the individual. In all these cases, the term *unconscious* referred to the unintentional nature of the behavior or process, and the concomitant lack of awareness was not of the stimuli that provoked the behavior, but of the influence or consequences of those stimuli.

Thus, the use of the term *unconscious* was originally based on one’s unintentional actions and not on one’s ability to process subliminal-strength information (as the technology needed to present such information did not yet exist). And this equation

of *unconscious* with *unintentional* is how unconscious phenomena have been conceptualized and studied within social psychology for the past quarter century or so. [Nisbett and Wilson’s \(1977\)](#) seminal article posed the question, “To what extent are people aware of and able to report on the true causes of their behavior?” The answer was “not very well” (see also [Wilson & Brekke, 1994](#)), which was surprising and controversial at the time given the overall assumption of many that judgments and behavior (the higher mental processes) were typically consciously intended and thus available to conscious awareness. If these processes weren’t accessible to awareness, then perhaps they weren’t consciously intended, and if they weren’t consciously intended, then how in fact were they accomplished?

This latter question motivated the social psychology research into priming and automaticity effects, which investigated the ways in which the higher mental processes such as judgment and social behavior could be triggered and then operate in the absence

of conscious intent and guidance. Consequently, this research operationally defined unconscious influences in terms of a lack of awareness of the influences or effects of a triggering stimulus and not of the triggering stimulus itself ([Bargh, 1992](#)). And what a difference this change in operational definition makes! If one shifts the operational definition of the unconscious from the processing of stimuli of which one is not aware to the influences or effects of stimulus processing of which one is not aware, suddenly the true power and scope of the unconscious in daily life become apparent. Defining the unconscious in terms of the former leads directly to the conclusion that it is dumb as dirt ([Loftus & Klinger, 1992](#)), whereas defining it in terms of the latter affords the opinion that it is highly intelligent and adaptive.

This expanded and enhanced view of the unconscious is also more compatible with theory and evidence in the field of evolutionary biology, than is the “subliminal only” view of cognitive psychology. As did Darwin and Freud, evolutionary biologists also think of the unconscious much more in terms of unintentional actions rather than unawareness of stimuli. In his seminal work, *The Selfish Gene*, [Dawkins \(1976\)](#) noted the awe-inspiring and intelligent designs in nature that arose merely through blind natural selection processes. He called nature the “blind watchmaker, the unconscious watchmaker,” because there was no conscious intentional guiding hand in producing these intelligent designs (Dennett, [1991](#), [1995](#)).

THE NATURAL UNCONSCIOUS OF EVOLUTIONARY BIOLOGY

Consonant with these basic assumptions in natural science, social cognition research over the past 25 years has produced a stream of surprising findings regarding complex judgmental and behavioral phenomena that operate outside of awareness. Because the findings did not make sense given the “dumb unconscious” perspective of the psychological science mainstream (to wit, how could a processing system so dumb accomplish so much in the way of adaptive self-regulation?), we had to look outside of psychology to understand them and their implications for the human mind. Happily, when placed in the broader context of the natural sciences, especially evolutionary biology, the widespread discoveries of sophisticated unconscious behavior guidance systems not only make sense, they turn out to have been predicted on a priori grounds ([Dawkins, 1976](#); Dennett, [1991](#), [1995](#)).

Genes, Culture, and Early Learning

Given the uncertainty of the future and the slow rate of genetic change, our genes have provided us not with fixed responses to specific events (because these cannot be anticipated with any degree of accuracy), but with general tendencies that are adaptive across local variations ([Dawkins, 1976](#)). It is for this reason that evolution has shaped us to be open-ended systems ([Mayr, 1976](#)). This open-ended quality gives room for “fine-tuning” the newborn to local conditions. Much of this is given to us by human culture, the local conditions (mainly social) of the world into which we happen to be born. [Dawkins \(1976\)](#) noted that phenotypic plasticity enables the infant to absorb, entirely automatically, “an already invented and largely debugged system of habits in the partly unstructured brain” (p. 193).

The gleaning of cultural knowledge is a giant step towards adaptation to the current

local environment. Any human infant born today can be relocated immediately to any place and any culture in the world and will then adapt to and speak the language of that culture just as well as any child born there ([Dennett, 1991](#)). The cultural guides to appropriate behavior (including language, norms, and values) are “downloaded” during early childhood development, thereby greatly reducing the unpredictability of the child’s world and his or her uncertainty as to how to act and behave in it.

And it is not just overall cultural norms and values that are so readily absorbed during this early period of life; we also absorb the particulars of the behavior and values of those closest to us, providing still finer tuning of appropriate-behavior tendencies. In a review of 25 years of infant imitation research, [Meltzoff \(2002\)](#) concluded that young children learn much about how to behave by mere passive imitation of fellow children and also their adult caretakers. Infants in particular are wide open to such imitative tendencies, having not yet developed cognitive control structures to suppress or inhibit them.

Unconscious Goal Pursuit as an Open-Ended System

Genes primarily drive our behavior through motivations ([Tomasello et al., 2005](#)). The active goal or motive is the local agent by which the genetic influence from the distant past finds expression. Evolution works through motives and strategies—the desired end states that we seek from whatever starting point in history and geographical location the cards of fate have dealt us ([Tomasello et al., 2005](#)).

Many recent studies have now shown that unconscious goal pursuit produces the same outcomes that conscious goal pursuit does (reviews in [Dijksterhuis, Chartrand, &](#)

[Aarts, 2007](#); [Fitzsimons & Bargh, 2004](#)). The goal concept, once activated without the participant’s awareness, operates over extended time periods (without the person’s conscious intent or monitoring) to guide thought or behavior towards the goal (e.g., [Bargh, Gollwitzer, Lee-Chai, & Troetschel, 2001](#)). For example, unobtrusive priming of the goal of cooperation causes participants playing the role of a fishing company to voluntarily put more fish back into a lake to replenish the fish population (thereby reducing their own profits) than did participants in a control condition ([Bargh et al., 2001](#)).

Moreover, the qualities of the underlying process appear to be the same, as participants with interrupted unconscious goals tend to want to resume and complete a boring task even when they have more attractive alternatives and will show more persistence on a task in the face of obstacles than do participants in control conditions ([Bargh et al., 2001](#)). These features have long characterized conscious goal pursuits ([Lewin, 1935](#)). What accounts for the similarity between unconscious and conscious goal pursuit? Given the late evolutionary arrival of conscious modes of thought and behavior (e.g., [Donald, 1991](#)), it is likely that conscious goal pursuit exapted, or made use of, already-existing unconscious motivational structures ([Campbell, 1974](#); [Dennett, 1995](#)).

The open-ended nature of such unconscious goal pursuit is revealed by the fact that the goal operates on whatever goal-relevant information happens to occur next in the experimental situation (supraliminal, of course), which could not be known to the person beforehand—just as our genes programmed us to be capable of adapting to and thriving in local conditions far into a future that could not be anticipated in any detail. That the unconsciously operating goal is able to adapt to whatever happens next and use that information to advance the

pursuit of the goal clearly demonstrates a level of flexibility that belies the “dumb unconscious” caricature, in which the unconscious is said to be capable only of rigid and fixed responses ([Loftus & Klinger, 1992](#)). The notion of the inflexible unconscious is also inconsistent with basic observations in the study of motor control, as highly-flexible online adjustments are made unconsciously during a motor act such as grasping a cup or blocking a soccer ball ([Rosenbaum, 2002](#)).

Social Behavior as Unconsciously Guided by the Current Context

The open-ended nature of our evolved design has also caused us to be highly sensitive and reactive to the present, local context. Just as evolution has given us general “good tricks” ([Dennett, 1995](#)) for survival and reproduction, and culture and early learning have fine-tuned our adaptive unconscious processes to the more specific local conditions into which we were born, *contextual priming* is a mechanism that provides still more precise adjustment to events and people in present time ([Higgins & Bargh, 1987](#)). In contextual priming, the mere presence of certain events and people automatically activates our representations of them, and concomitantly, all of the internal information (goals, knowledge, affect) stored in those representations that is relevant to res

CONCLUSION

For most of human history, only the concepts of conscious thought and

intentional behavior existed. In the 1800s, two very different developments—hypnotism and evolutionary theory—both pointed to the possibility of unconscious, unintended causes of human behavior. But nearly two centuries later, contemporary psychological science remains wedded to a conscious-centric model of the higher mental processes; it hasn’t helped that our view of the powers of the unconscious mind have come largely from studies of subliminal information

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