

The modern unconscious

Psychology, as a scientific enterprise, began by using the simplest method of all: self-reports. To study the nature of conscious experiences, just ask people about those experiences. But this soon ran into a problem. The methods used to study conscious thought were unreliable: one subject's introspection about a sensory experience was not the same as another subject's. Fed up with this lack of replicability, the scientific establishment in the form of J. Watson¹ threw out the study of the conscious mind as unscientific. Instead, he said, the task of psychology should be to manipulate the external stimulus environment and objectively measure the subject's responses, without recourse to any internal "black box" of mental activity.

Behaviorists thus sacrificed the richness and complexity of human psychology in return for a greatly simplified version for which they had reliable methods to study. And, because the mind no longer mattered, they could study the much more convenient rat or pigeon instead of actual humans. But worst of all, over time, behaviorists came to confuse the lack of available reliable methods to study human mental life with the lack of any causal role played by mental life².

It was only with the cognitive revolution of the 1960s that mental processes once again became a legitimate topic of study in scientific human psychology. And a major reason for the cognitive revolution was that technology had developed sufficiently to permit accurate and replicable methods. Now that the methods existed to study mental processes, mental processes themselves existed again.

At about the same time as Watson published his Behaviorist Manifesto, S. Freud was publishing his analyses of the human unconscious mind. Freud and his contemporary P. Janet were medical scientists who studied patients with distressing ailments for which no physical cause could be found. A prevalent viewpoint of that era was that these abnormal emotional and behavioral syndromes were supernaturally caused, such as by demonic possession³. As medical scientists, however, Freud and Janet believed in physical causes and proposed that a separate unconscious mind was the culprit. In effect, they took the metaphysical demons and located them inside the patient's physical head.

Here again, though, a methodological error was made. Although Janet cautioned that the notion of a separate unconscious mind should apply only to those abnormal cases, Freud insisted that it held for all human beings⁴. The error was to generalize from a (small) sample of abnormal functioning to the normal, everyday mental life of everyone. But, as we know, Freud's position won the day.

There was a second problem with Freud's theory. The issue was falsifiability. For scientific progress to be made, K. Popper⁵ argued, a good theory had to be falsifiable – it had to be capable of generating hypotheses that could be put to the test and possibly found wrong.

There is a lamentable tendency in scientific practice to dismiss a flawed approach as completely wrong – thereby throw-

ing out the worthwhile baby with the worthless bathwater. Many today dismiss the very notion of unconscious influences merely because Freud's theory was unfalsifiable and based on abnormal cases. And cognitive psychology threw out behaviorism and with it the idea that the external environment could cause human choices and behavior⁶. But of course there is a third alternative to a theory being either entirely correct or entirely incorrect.

Like the three blind men reporting on the elephant, all three of the grand psychological theories of the past century contained a profound truth regarding human nature, but none by itself gave the complete picture. The elegance of the modern research on unconscious processes is that it combines the best of these three major psychological theories. What this research reveals is that many important affective, motivational and behavioral phenomena operate without the person's awareness or conscious intention (Freud); that they are often triggered by events, people, situational settings, and other external stimuli (behaviorism); but that these external stimuli exert their effect through their automatic activation of internal mental representations and processes (cognitive psychology).

This research enterprise has the additional advantage of overcoming the methodological problems of the earlier work. It studies the behavior and psychological reactions of average human beings (not clinical patients, or rats or pigeons) in everyday situations, with the participants randomly assigned to experimental conditions, and through the generation and testing of falsifiable hypotheses.

What have we learned from this research? The two main conclusions are that there are several different sources of unconscious influence over choices and behavior, and that they are generated from the same, single mind that produces conscious influences.

The dominant assumption of cognitive psychology in the 1970s was that the higher mental processes were almost entirely under conscious, executive control⁷. But, as the research progressed from 1980 onwards, the role of unconscious processes in everyday life was revealed to be far greater than anyone ever suspected.

The behavioral data in social and motivational psychology consistently pointed to unconscious processes having the same signature characteristics and operating features as when those processes were engaged in consciously. This was confirmed by brain imaging studies showing that the same brain regions – reactive to the presence of reward and incentive, for example, or involved in computations in complex decision-making – were active whether the person was aware of the process operating or not. There is a single mind, and it can operate in either conscious or unconscious mode.

The main mechanisms of unconscious influence come from the past, the present, and the future⁸. From the past are deep and primary motivations from our evolutionary heritage, such

1 as for survival and safety, resource acquisition, reproduction
2 and social bonding. Recent research has shown how even
3 abstract social attitudes, such as conservative vs. liberal ide-
4 ologies, and attitudes towards immigration, are influenced by
5 these deeply rooted motivations.

6 But one's own personal past – namely, early childhood experi-
7 ences of which one has no memory as an adult – also exerts
8 its unconscious influence. Longitudinal studies of infants
9 whose degree of attachment and bonding to the mother were
10 measured when they were 1 year old show that this measure
11 predicted how many friends they had in high school, and how
12 often their close romantic relationships broke up in their 20s.

13 In the present, the behavior and emotions of those around us
14 are contagious to us. This effect is now even more pronounced
15 thanks to social media and electronic social networks. People
16 we don't even know affect us in important ways, such as in con-
17 tributing to the development of obesity and depression.

18 And how can the future affect us unconsciously if it hasn't
19 happened yet? Because our minds are capable of time travel,
20 and spend a good deal of time in the future. Our current goals
21 for future outcomes color how we see the present – without re-
22 alizing it, what is good for the goal becomes what we consider
23 good for us, even if it runs against our core values and identity.
24 On the more positive side, our important goals are capable of

1 operating in the background while our conscious mind is else- 1
2 where, a phenomenon which many famous writers and scien- 2
3 tists have noted was a boon to their creativity and insights. 3

4 Psychology may be a young science, but it has already been 4
5 blessed with the lifelong efforts of some very deep thinkers. In 5
6 hindsight, none of them were entirely right, but neither were 6
7 they entirely wrong. It is by combining their collective wisdom 7
8 that we can reach a more complete and accurate account of 8
9 the human mind, including the sophisticated and adaptive 9
10 ways it operates unconsciously. 10

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