

Unintended Influences of Perception and Memory: Attention, Awareness, and Control

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There has been a great deal of recent interest in the finding of dissociations between performance on implicit or indirect and explicit or direct tests of memory. Implicit tests (e.g., word stem completion) are said to primarily reflect automatic or unconscious uses of memory, whereas explicit tests (e.g., cued recall) primarily reflect strategic or consciously-controlled uses of memory. I argue that implicit tests of perception and memory share important characteristics with projective tests, such as the Rorschach test, that have traditionally been used to gain evidence of unconscious influences. For projective tests as well as implicit tests, it is dissociations with performance on direct tests that provide evidence of unconscious influences. A Rorschach test is said to provide evidence of inner conflicts that could not be revealed by directly asking the person about those conflicts. Similarly, an implicit test of memory sometimes reveals evidence of memory, although when directly asked, a person is unable to report the relevant memory.

Implicit and projective tests also share problems for interpretation. The major problem is that of relating processes to tasks. Most of us are not tempted to treat a Rorschach test as if it measures only unconscious influences. We realize that people may sometimes "catch-on" to the intent of a projective test, and fake performance. That is, we are convinced that a Rorschach test is not factor or process pure. Similarly, for the stem-completion task and other implicit tests of memory, people may sometimes intentionally use memory. Problems arising from the pos-

sibility of contamination of a supposed measure of unconscious influences is most obvious in the case of unconscious perception. The history of that area has been an apparently never ending circle of claimed demonstrations of unconscious perception, followed by disqualifying claims of contamination.

Of course, it is well known that tests of unconscious perception sometimes reflect aware perception and that tests of implicit memory sometimes reflect intentional uses of memory. This possibility of contamination does, though, produce serious problems for interpretation. One strategy is to further refine the measure of unconscious influences in an attempt to produce a test that is process pure. This has been the strategy in investigations of unconscious perception and, to a lesser extent, in studies of implicit memory. However, it may be impossible to construct a test of unconscious influences that is never contaminated by intentional uses of memory. And even if one could construct such a test, its use would radically restrict the types of questions about unconscious influences that could be asked.

Rather than identify different processes with different tasks, as is done by use of the implicit/explicit distinction, we have developed a method for separating the within-task contributions of unconscious and consciously-controlled influences. Our general approach starts with the assumption that unconscious or automatic influences and consciously-controlled influences make independent contributions to performance. We (e.g., Jacoby, 1991; Jacoby, Lindsay & Toth, 1992) have used a "process-dissociation procedure" to separate the within-task contributions of consciously-controlled and automatic uses of memory. Stated simply, conscious control is measured as the difference between performance when one is trying to, versus trying not to, be influenced by memories from a given source. A lack of difference between those two conditions is taken as evidence of 0 conscious control. Given a measure of conscious control, a measure of

Several experiments were reported to show the utility of the process-dissociation procedures. Among the findings of those experiments is that conditions traditionally associated with automaticity do have differential effects on consciously-controlled and unconscious (automatic) influences, as measured by the process-dissociation procedure. For example, divided, as compared to full, attention radically reduces conscious control, but leaves unconscious influences invariant. Other experiments were used to illustrate potential advantages of the process-dissociation procedure over reliance on implicit tests as a means of investigating unconscious influences. Still other experiments were briefly described to show that the process-dissociation procedure can be extended to separate the contributions of consciously-controlled and unconscious influences in a wide variety of domains.

References

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