4 Intention, Awareness, and Implicit Memory: The Retrieval Intentionality Criterion

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ABSTRACT

The recent surge of interest in implicit memory has spawned an impressive variety of new empirical discoveries concerning the nature of normal and abnormal memory processes (Richardson-Klavehn & Bjork, 1988; Schacter, 1987). Yet as the editors of this volume rightly point out, somewhat less attention has been paid to conceptual and theoretical issues associated with the phenomena of interest. In this chapter, we address a number of conceptual problems concerning implicit memory that we believe need to be, but have not yet been, confronted and discussed directly.

This chapter focuses on the nature of and relations between two critical aspects of implicit memory: unintentional vs. intentional retrieval processes, and awareness vs. unawareness of remembering during implicit test performance. We begin by discussing these phenomena with respect to definitions of implicit memory. We then consider them in regard to the related problem of developing suitable criteria for distinguishing implicit from explicit memory processes, and put forward a *retrieval intentionality* criterion for making such a distinction in terms of intentional vs. unintentional retrieval processes. Finally, we consider a series of experiments that explore the issue of awareness vs. unawareness of remembering during test performance.

DEFINING IMPLICIT MEMORY

By the early 1980s, research on both normal memory (e.g., Graf, Mandler, & Haden, 1982; Jacoby & Dallas, 1981; Tulving, Schacter, & Stark, 1982; Winnick

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& Daniel, 1970) and organic amnesia (e.g., Cohen & Squire, 1980; Milner, Corkin, & Teuber, 1968; Moscovitch, 1982; Warrington & Weiskrantz, 1974) had made it abundantly clear that when subjects are given such tests as fragment completion, word identification, and lexical decision, a very different picture of memory could be observed than that provided by standard recall and recognition tests. Experimental variables that had large effects on one class of test had little or none on the other, and amnesic patients who performed disastrously on recall and recognition tests showed robust priming effects on fragment completion and other such tasks. However, there was (and still is) a good deal of theoretical controversy about the observed dissociations; some argued that it was necessary to postulate different memory systems whereas others opted for unitary system accounts.

When Graf and Schacter (1985) introduced the concepts of implicit and explicit memory, they sought to provide a *descriptive*, as opposed to a *process* distinction that would facilitate classification and discussion of relevant phenomena, and at the same time steer clear of the multiple vs. single memory system controversy (1985, p. 501). Graf and Schacter stated that "implicit memory is revealed when performance on a task is facilitated in the absence of conscious recollection; explicit memory is revealed when performance on a task requires conscious recollection of previous experiences" (p. 501). The main purpose of this definition was to capture a key difference between recall and recognition tasks on the one hand and word completion, lexical decision, and similar tasks on the other: performance on the former class of tasks involves explicit reference to or "conscious recollection" of a specific prior episode, whereas performance on the latter class of tasks does not.

Unfortunately, there is a potentially confusing ambiguity in this definition, centering on the use of the term *conscious recollection*. As discussed by Schacter (1989a) and Richardson-Klavehn and Bjork (1988), this term can be used in two quite different senses. First, conscious recollection can refer to *intentional* retrieval of recently studied information: the subject deliberately "thinks back" to a learning episode and searches for target information. When used in this sense, "conscious recollection" refers to the way in which the retrieval process is initiated, and is synonymous with such terms as *intentional*, *voluntary*, or *deliberate* recollection. Second, conscious recollection can refer to a phenomenological quality associated with the output of the retrieval process: a "recollective experience" (Tulving, 1983) or awareness of remembering that entails a re-experiencing of a recent episode.

When conscious recollection is used in the first of the two foregoing senses, the notion that performance on a task can be facilitated "in the absence of conscious recollection" (Graf & Schacter, 1985) means that test performance can be influenced by recently studied information even though the subject does not intentionally think back to the study episode. When conscious recollection is used in the latter sense, the statement that performance facilitations occur "in the ab-