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Research Notes

The Butcher on the Bus: A Note On Familiarity Without Recollection

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In 1980, George Mandler published an article in *Psychological Review* that has become very influential in the study of memory. As evidence, according to Google Scholar (as of August 17, 2020), this article has been cited 3,391 times. Writing about recognition memory, Mandler made a fundamental distinction between recognition involving familiarity and recognition involving recollection. He saw the familiarity process as “context free” whereas he saw the recollection process as “identification as a result of a retrieval process” (Mandler, 1980, p. 253). In discriminating these two processes, he was developing the distinction made by Atkinson (see Atkinson, Herrmann, & Wescourt, 1974; Atkinson & Juola, 1974) between familiarity and search. Mandler’s distinction in turn prefaced the “remember/know” procedure suggested by Tulving (1985) that has since come to be extensively used by memory researchers (see Yonelinas, 2002, for a review).¹

To portray his distinction in everyday terms, Mandler (1980) introduced what has since become a very familiar illustration:

The process of arriving at a decision about prior occurrence is defined here as *recognizing*. In the extreme case such a process will sometimes produce a context-free judgment, particularly in everyday life situations. Consider seeing a man on a bus whom you are sure that you have seen before; you “know” him in that sense. Such a recognition is usually followed by a search process asking, in effect, where could I know him from? Who is he? The search process generates likely contexts (Do I know him from work; is he a movie star, a TV commentator, the milkman?). Eventually the search may end with the insight, that’s the butcher from the supermarket! (pp. 252–253)

Mandler then went on to characterize the critical role played by context in this situation:

The search for identification seems to be a search for contexts. It is more likely, however, that this search for contexts is only the first step in a retrieval process; the final result is the recovery of the required identification. For example, a context such as “Do I know him from work?” restricts the search set but is unsuccessful as a retrieval cue. On the other hand, the context “Do I know him from the supermarket?” together with the physical characteristics of the man, produces enough cue specificity to recover the memory (representation) of the butcher. Contexts are addressed and used, but only to provide more adequate cues or descriptors of the target event. (p. 253)

On the same page, he even introduced what has since become the label for his illustration, saying that “Specific identification of an event is not possible on the basis of its familiarity alone. The *butcher-in-the-bus* is one intuitive demonstration of such an assertion” (p. 253, emphasis mine).

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It appears to have been [Yovel and Paller \(2004\)](#) who first referred to this distinction as “the butcher-on-the-bus phenomenon,” a label that, with the subtle change from “in” to “on,” has caught hold even in the popular media, as in *Psychology Today* (<https://www.psychologytoday.com/ca/blog/quirks-memory/201208/nagging-feeling-familiarity-face>) and *Wikipedia* (https://en.wikipedia.org/wiki/Recognition_memory). Articles in journals even use this label in their titles (e.g., [Tunney, Mullett, Moross, & Gardner, 2012](#); [Waidergoren, Segalowicz, & Gilboa, 2012](#)) and refer to Mandler’s example as “classic” (e.g., [Cleary, Morris, & Langley, 2007](#); [Wixted & Mickes, 2010](#)), which [Mandler \(2008, p. 392\)](#) evidently enjoyed. And many other articles feature this illustration in their analysis and discussion (e.g., [Gruppuso, Lindsay, & Masson, 2007](#); [Hayes, Baena, Truong, & Cabeza, 2010](#); [Morris, Cleary, & Still, 2008](#); [Tanabe-Ishibashi, Ikeda, & Osaka, 2014](#)). [Brown \(2020\)](#) has recently provided an engaging account of the phenomenon.

The purpose of this note is, ironically, to provide context, in this case historical context. Twenty-seven years before [Mandler’s \(1980\)](#) article, [Charles Osgood \(1953\)](#) provided the following discussion of retention and interference theory in his book, *Method and Theory in Experimental Psychology*:

A[nother] cause of response decrement is *modification of the eliciting stimulus*. There are many illustrations from everyday life. A well-dressed gentleman standing in the theater line smiles and says hello to you. You return a timid smile and spend most of your time in the theater trying to remember who that person was. And how do you go about trying to recall? You probably set the problem-face successively into a series of contexts, the faculty members at the university, the people in the bank, clerks in various stores, and so forth. Finally it comes to you—he’s the man at the meat market! Because he usually appears in a white coat and an old straw hat—the stimulus situation had been sufficiently modified. (p. 550)

The similarity is striking, has not previously been noted in any other historical scholarship, and suggests that credit for this now famous illustration should actually go to Osgood. The overlap is remarkable certainly in the use of the butcher and meat market but it goes beyond that—to the importance of context and indeed to the critical role of retrieval cues, as [Osgood \(1953\)](#) goes on to say that,

The basic constructs of the interference theory of forgetting are the stimulus and the response, and interpretations can be made with clarity only where these constructs and their relationships are specifiable. The fundamental condition for forgetting is this: forgetting is a direct function of the degree to which substitute responses are associated with the original stimuli during the retention interval. (p. 550)

Is it possible that Mandler inadvertently borrowed Osgood’s illustration, a case of cryptomnesia ([Brown & Murphy, 1989](#); for a review, see [Tanigami, 2018](#))? Mandler obtained his doctorate at Yale University in 1953, the year that Osgood’s book appeared in print. It is perhaps noteworthy that Osgood was also a Yale graduate (in 1945). Might Mandler have come across Osgood’s book, which was comprehensive and well reviewed (see [Prentice, 1954](#)), or might he even have used this book as a text in a course? If so, Osgood’s chapter on retention would have been of particular interest to Mandler, and the prominent appearance of the above segment on the second page of that chapter would have been salient. It is likely that we will never know, but it is intriguing to speculate. If this was indeed a case of cryptomnesia, then it ironically also provides an illustration of the very topic that was the focal point of Mandler’s influential article—the butcher illustration was familiar, but he failed to recollect its source.

Of course, the feeling of familiarity without coincident recollection is a frustration that everyone has experienced: Osgood was certainly not the first to consider this circum-

stance.² In his classic paper arguing for interference as the predominant cause of forgetting and proposing a crucial role for context, [McGeoch \(1932\)](#) wrote,

One forgets the name of a person who appears unexpectedly, until some trick of speech, mannerism, or other aspect of the individual stimulates recall. . . . [T]he material has not been lost from the subject's repertoire, but it cannot be reinstated when wanted; it has been lost functionally for a certain period. . . . It is thinkable that a given material might suffer no decrement whatever from interpolated conditions, yet be unrecalable because of the lack of the proper eliciting stimulus. (p. 366)

Consider this even more pointed passage from [William James \(1890, Vol. I\)](#):

I enter a friend's room and see on the wall a painting. At first I have the strange, wondering consciousness, 'surely I have seen that before,' but when or how does not become clear. There only clings to the picture a sort of penumbra of familiarity—when suddenly I exclaim: "I have it, it is a copy of part of one of the Fra Angelicos in the Florentine Academy—I recollect it there!" (p. 658)

[James \(1890, Vol. I\)](#) set up this illustration—using the terms familiarity and recollection—by describing the process in terms of the recall of associations, similar to the recall of contexts:

In short, we make search in our memory for a forgotten idea, just as we rummage our house for a lost object. In both cases we visit what seems to us the probable *neighborhood* of that which we miss. We turn over the things under which, or within which, or alongside of which, it may possibly be; and if it lies near them, it soon comes to view. But these matters, in the case of a mental object sought, are nothing but its *associates*. The machinery of recall is thus the same as the machinery of association. (p. 654)

Sixty years earlier, [James Mill \(1829\)](#) described much the same situation, emphasizing the recollection of associations and thereby directly influencing William James:

I meet an old acquaintance, whose name I do not remember, and wish to recollect. I run over a number of names, in hopes that some of them may be associated with the idea of the individual. I think of all the circumstances in which I have seen him engaged; the time when I knew him, the persons along with whom I knew him, the things he did, or the things he suffered; and, if I chance upon any idea with which the name is associated, then immediately I have the recollection; if not, my pursuit of it is vain. (pp. 235–236)

Nor, indeed, was Mill the first to describe this phenomenon. In his analysis of Aristotle's treatise *De memoria et reminiscencia*, [Sorabji \(1972\)](#) writes that one of Aristotle's two kinds of recollection is this: "we start with an image of the thing we later recollect, but fail at first to refer the image to the thing. Only after passing through a series of associated images, do we manage to refer to it" (p. 42). The intellectual lineage for the persistent puzzle of this compelling experience, dependent as it is on context, has been characterized by unreferenced reiteration and has until now remained obscure. It clearly has captivated many throughout—and even long before—the history of disciplinary psychology, just as it continues to do today.

² The Scots even have a word for this state—*tartle*. [Goldstein and Gigerenzer \(2002\)](#) first noted this in the psychological literature, and it appears in [Reingold \(2000\)](#). I thank Anne M. Cleary for pointing these sources out to me.

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Corrections

- In the August 2020 Announcement about the changes in directorship over at the Cummings Center for the History of Psychology, **Cathy Faye** was misidentified as the current president of APA Division 26, when in fact she is the acting past president and **Russell Kosits** is currently serving as president.