Table 1
Proportions of Hits and False Alarms (FAs) and Mean d' Scores as a Function of Font Match and Font Frequency Conditions for the No-Delay Condition in Experiment 1

Font Match Condition	High			Low			Novel (Collapsed)		
	Hit	FA	d'	Hit	FA	d'	Hit	FA	d'
Original	.87	NA	1.45	.91	NA	1.86			
Used	.79	.42	1.11	.81	.37	1.32			
Novel	.76*			.79*			.78	.33	1.34

Note—See the Results section of Experiment 1 for an explanation of the reason for examining only the collapsed data in the novel condition. *Frequency condition reflects the font used at study.

[$t(32) = -1.16$] or in d' [$t(32) = -1.09$]. On the basis of these findings, all subsequent analyses will collapse across encoding condition to create one *novel* condition.

Replicating Reder et al. (2002), we found that in the immediate testing condition, d'[4] was better when the test font had only been studied with one word, rather than with many words [$F(1,17) = 26.74, p < .0001$] and when the encoding and the test fonts matched [$F(1,17) = 9.34, p < .01$]. In order to test the effect of delay, and because the experimental design was not fully factorial (we make no distinction between high and low frequency for the *novel* condition), we treated the various font conditions as five levels of one factor that was crossed with delay. There was a main effect of delay on d' [$F(1,31) = 30.785, p < .001$] and an interaction between font condition and delay [$F(4,28) = 4.377, p < .01$]. By dropping the *novel* condition, we could perform an analysis of variance (ANOVA) on font frequency, font match (between study and test), and delay. There was a significant interaction between font frequency and delay [$F(1,31) = 10.963, p < .01$] and between match condition and delay [$F(1,31) = 4.20, p < .05$], but no three-way interaction ($F < 1$).[5] These effects on d' indicate that the pattern of the data cannot simply be attributed to a response bias.

Our main concern, however, was the effect of font frequency on false alarms. Figure 2 shows the false alarm rates as a function of font frequency and delay. There was a main effect of font frequency [$F(2,62) = 15.37, p < .001$], so that more false alarms were elicited when foils were presented in high-frequency fonts than in novel (unstudied) fonts. Also, a mirror pattern was found in the immediate testing condition: The participants produced more hits for words presented in low-frequency fonts and more false alarms for words presented in high-frequency fonts. An ANOVA performed on the *used* condition for no-delay participants showed a marginally significant interaction between hits/false alarms and font frequency [$F(1,17) = 3.95, p = .06$]. When word frequency is manipulated, the same pattern is reported, indicating that perceptual features (font) affect memory in a fashion similar to that for aspects of lexical/conceptual memory. The pattern in the delay condition was different: The participants produced both more hits and more false alarms when viewing words presented in high-frequency fonts. This concordant pattern is similar to that seen in word frequency experiments when participants' opportunities to recollect are reduced by manipulating the study phase (e.g., Joordens & Hockley, 2000) or when the population studied is made up of amnesic individuals (e.g., Huppert & Piercy, 1976).

An ANOVA on false alarms showed a main effect of delay [$F(1,31) = 8.44, p < .01$], so that participants made more false alarms when the retention interval increased. The interaction of delay with font frequency was not reliable [$F(2,62) = 1.20, p > .05$]; however, there was a suggestion that the effects of font frequency varied with delay, and we decided to examine these effects, using t tests.[6] For the participants tested immediately after the encoding phase, the contrast between high- and low-frequency fonts was only marginally significant [$t(17) = 1.88, p = .07$], but new words presented in a novel font produced fewer false alarms than did words presented in a low-frequency font [$t(17) = 2.53, p < .05$]. On the other hand, at a 1-week delay, the difference in false alarm rates for words presented in a high-frequency font was reliably larger than that for words presented in a low-frequency font [$t(14) = 2.83, p < .05$], whereas the difference between low-frequency and novel fonts was not reliable [$t(14) = 1.07, p > .05$].

We suspect that the relative familiarity of the fonts in the conditions changed over time, resulting in a reliable difference between the novel and the low-frequency font in the immediate condition, but not after the delay. Perhaps after a week's delay, the participants found fonts that had been seen 12 times familiar, whereas fonts that had been seen only once were not appreciably more familiar than those not seen at all. Conceivably, the high- versus low-frequency difference could be obtained in an immediate test if the frequency difference was accentuated. This was our motivation for Experiment 2.

EXPERIMENT 2

Experiment 2 was similar to Experiment 1, with the following exceptions. Having demonstrated that participants can make false alarms on the basis of perceptual

Table 2
Proportions of Hits and False Alarms (FAs) and Mean d' Scores as a Function of Font Match and Font Frequency Conditions for the Delay Condition in Experiment 1

Font Match Condition	High			Low			Novel (Collapsed)		
	Hit	FA	d'	Hit	FA	d'	Hit	FA	d'
Original	.79	NA	0.64	.69	NA	0.51			
Used	.76	.64	0.44	.64	.53	0.33			
Novel	.57*			.59*			.58	.48	0.28

Note—See the Results section of Experiment 1 for an explanation of the reason for examining only the collapsed data in the novel condition. *Frequency condition reflects the font used at study.