Affective and informational meaning and their relationship to familiarization

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*Subjects were familiarized on one of two dissyllables lists, and on one other "filler" list. Following familiarization, association latencies and polarization scores were obtained from each subject for all non-filler stimuli. The lists differed significantly in pre-familiarization latencies; i.e., one was inherently more "meaningful" than the other. Polarization scores were increased as a function of familiarization for stimuli in the low initial latency (high *m*) lists, but were decreased for the high initial latency (low *m*) stimuli.*

In a previous paper (Moursund, 1966) an attempt was made to ascertain the relationship between familiarity and meaningfulness in nonsense words, using association latency as the dependent variable. While the data of this study suggested that such a relationship did exist, the results were not as clear-cut as had been hoped.

Other investigators have experienced similar difficulties in studying familiarity and meaningfulness. Although it has been relatively well established that familiarization enhances learning, and that meaningfulness does the same (Epstein et al, 1960), demonstrating a link between meaningfulness and familiarity has proven difficult. Partially responsible for these difficulties may be the extreme inter-subject variability encountered in most of the dependent variables associated with meaningfulness.

The absence of a single operational definition of meaningfulness has also contributed to the confusion in this area. Association production and association latency, the most frequently used indicators, are subject to extremely high variability, perhaps due to partial "blocking" of threatening or unpleasant response tendencies; also, they are quite vulnerable to experimenter bias. Semantic differential polarization has also been used as a measure of *m*; while it may not be as variable among and within Ss due to its relative freedom from time constraints, it measures a quite different aspect of meaning. It might be well, in considering these measures, to differentiate between *informational* meaningfulness (to which, hopefully, the production and latency methods address themselves) and *affective* meaningfulness (to which polarization measures are relevant). The distinction is not a completely new one; Noble (1958) measured the correlation between *m* and *e* (emotionality) for English words. However, he did not measure *e* for nonsense stimuli, nor did he report its relevance to any variables other than *m*; and the concept was not enthusiastically received.

In the present study an attempt is made to inves-

tigate the relationship between familiarization and both *i-m* (informational meaning) and *a-m* (affective meaning).

Method

Subjects. Forty undergraduates (mostly sophomores) served as Ss. These Ss were randomly divided into four groups of 10 each.

Materials and procedure. Stimulus materials consisted of three lists of non-English-word dissyllables (see Fig. 1), printed on slides and displayed by means of a Carousel projector. Two groups of Ss (the A groups) were familiarized on the A and *F*₁ (filler) lists, while the other two groups (B groups) were familiarized on the B and *F*₂ lists. Familiarization trials consisted of five exposures to each stimulus word (randomly ordered), each exposure of 3 sec duration. Ss were instructed to concentrate on each word as it appeared, and to say it to themselves, but not to pronounce it out loud.

Association trials immediately followed familiarization. Ss were instructed to give the first association that occurred to them for each stimulus, and the latencies of the associations were recorded. All Ss were shown A and B list words only, and two random orders were used (each with one of the A groups and one of the B groups, respectively).

Following the association trials, each S was asked to fill out a semantic differential form with one set (page) of responses for each A list and B list word. The order of the pages corresponded to the association trial order.

Results and Discussion

First, using association latencies as the dependent variable, possible order and list effects were investigated. While there were no significant differences in latency as a function of presentation order, there were clear-cut list effects. For both familiar and non-familiar conditions, the B list produced shorter latencies; the effect was more pronounced under the non-familiar conditions ($\chi^2 > 9.0$, $p < .025$). In other words, B list stimuli possessed more inherent *i-m*. Familiarization had virtually no effect on B list

LIST A	LIST B	LIST <i>F</i> ₁	LIST <i>F</i> ₂
Balap	Paleb	Quipson	Wispok
Nostaw	Waston	Tarop	Porat
Latuk	Kutal	Neglan	Gannel
Nares	Saren	Sagrole	Lorsag
Gokem	Megok	Polef	Felop

Fig. 1. Stimulus Lists A, B, *F*₁ and *F*₂.

	FAMILIAR	NON-FAMILIAR
List A	5.4	6.2
List B	4.8	4.6

Fig. 2. Mean median latencies for familiarized and non-familiarized A-list and B-list stimuli.

words; mean latencies were almost equal. A list latency differences were in the expected direction, with the familiar condition producing shorter latencies, but at a nonsignificant level (see Fig. 2).

The polarization data served to underline further the complex effects of list differences (see Fig. 3). The interaction between lists and treatments was highly significant ($F=13.6$, $df=1/36$, $p<.01$), with the predicted treatment effects occurring on List B but a strong reverse effect showing up on List A.

Perhaps two strong conclusions may be drawn from these data. First, the particular stimulus words used in a study cannot be discounted as a highly important factor. Too often we tend to make assumptions about our stimuli based on tables drawn up a decade or so ago, or on our own intuition, forgetting the highly fluid and personal nature of verbal stimuli. Second, it seems quite clear that the association latency and the polarization measures are getting at two quite different phenomena. Whatever subjective definition of meaning he may have, the scientist must distinguish between *i-m* and *a-m* if he is to understand the roles of each in learning.

	FAMILIAR	NON-FAMILIAR
List A	115.3	134.9
List B	143.1	108.9

Fig. 3. Mean total polarization for familiarized and non-familiarized A-list and B-list stimuli.

In the present study, an interactive relationship seems to exist between *i-m* and *a-m*. The data suggest that novel stimuli intrinsically high in *i-m* (as measured by association latency) were relatively susceptible to being affect-charged through familiarization. For those initially less meaningful, in an information-carrying sense, familiarization had the opposite effect, tending to cancel or flatten whatever affect charge was already there. Clearly, the present study is far too small to begin to answer the questions it raises. Nevertheless, it does reinforce a previous contention: We cannot deny the effects of familiarization on meaningfulness until a great deal more is known about both of these variables.

References

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