Celebrity Recognition Priming: Is Association Required?

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Does the semantic organization of actors consist of only associative links (e.g., former co-stars in a popular movie)? Or can two actors share a purely categorical link? Previous studies on celebrity recognition have found that celebrity names (e.g., Adam Sandler) were recognized faster following presentation of an associated person (e.g., Drew Barrymore). Yet the evidence for semantic priming without association (i.e., "categorical priming"; Jimmy Fallon → Adam Sandler) is equivocal (see Carson & Burton, 2001).

Several possible reasons could account for the lack of reliable categorical priming including: target familiarity, prime and target similarity (see McRae & Boisvert, 1998), and stimulus onset asynchrony (SOA), with longer SOAs required for categorical than associative priming. We more closely controlled these critical factors to re-examine whether celebrity names would be recognized faster following an associatively or categorically related celebrity. Prime-type (associative *vs.* categorical) was a between-participants factor to prevent the robust associative relation from overshadowing the weaker categorical relation.

Method

Participants

University of Georgia undergraduates participated in the experiment for course credit and were randomly assigned to the associative (n = 53) or to the categorical (n = 51) Prime-type condition. An additional 196 undergraduates participated in the stimulus-norming tasks described below.

Materials and Procedure

Participants (n = 52) rated the familiarity of 268 actor names on a scale from 1 (unfamiliar) to 7 (very familiar). From these names, 140 were selected on the basis of having familiarity ratings ≥ 5.00 for inclusion in the association task, wherein participants (n = 60) provided the name of the first person who came to mind for the presented celebrity. Both forward and backward association probabilities were calculated for a selected 36 associatively-related prime-target pairs (M = .35, SE = .04 and M = .23, SE = .03). Celebrities that were similar to these targets were generated by the authors to serve as categorical primes. These primes were from the same actor category but were unassociated with the target. Thirty-six unrelated primes were selected

from a musical artist familiarity task (n = 50) on the basis of having no association with the target and having a familiarity rating ≥ 5.00. Finally, 34 participants rated the similarity between the target and each of the three Prime-types (counterbalanced across three lists). The categorical primes (M = 4.88, SE = .14) were reliably more similar than the associative primes (M = 3.99, SE = .21) and the unrelated primes (M = 2.38, SE = .09), both ps < .05.

Participants judged whether each of 72 target names was a known celebrity name. The experimental trials consisted of 18 related (either associative or categorical) prime-target trials, 18 unrelated prime-target trials (e.g., Sting → Adam Sandler), and 36 filler trials consisting of fictional target names (e.g., Bruce Willis → Carl Spencer). Each prime celebrity name was displayed on a computer screen for 500 msec, followed by a 1500 msec blank screen, and then the target name until a response was provided.

Results and Discussion

Overall, targets were recognized faster following the related primes (M = 757, SE = 13) than the unrelated primes (M = 784, SE = 13), p < .01. The Prime-type × Relation interaction was not reliable (p = .64). Critically, the related items were judged faster than the unrelated items within both the associative condition (31 msec; p < .05) and the categorical condition (23 msec; p < .05). Thus, results indicate that people belonging to the same category may be organized on the basis of similarity in addition to association.

Table 1: Response Times (msec);
Standard errors are in parentheses

Prime-type	Related	Unrelated
Associative	732 (17)	763 (15)
Categorical	782 (20)	805 (21)

References

Carson, D. R. & Burton, A. M. (2001). Semantic priming of person recognition: Categorical priming may be a weaker form of the associative priming effect. *The Quarterly Journal of Experimental Psychology, 54A,* 1155-1179.

McRae, K. & Boisvert, S. (1998). Automatic semantic similarity priming. *Journal of Experimental Psychology: Learning, Memory, and Cognition, 24,* 558-572.