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Labovitz School of Business & Economics, University of Minnesota Duluth, 11 E. Superior Street, Suite 210, Duluth, MN 55802

Toward a More Comprehensive Theory of Attitude Change: the Effects of Inter-Attitudinal Concept Structure on Attitude Dynamics

Leslie Dinauer, University of Maryland University College, USA

Theories of attitude change have generally failed to identify an architecture of inter-attitudinal structure. Such a failure is critical to consumer researchers for whom understanding attitudes is a primary pursuit. This theoretical study examined two competing models that explicitly address the influence of inter-attitudinal structure on attitude change dynamics. An experiment was conducted that manipulated nature of structure, priming, and focal concept of a persuasive message. The results show that linguistic organizational structures influence attitude change. However, such change is constrained less by a concept's relative position in the structure and more by the strength of the concept's association with other concepts in that structure.

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Toward a More Comprehensive Theory of Attitude Change: The Effects of Inter-Attitudinal Concept Structure on Attitude Dynamics

Leslie D. Dinauer, University of Maryland University College, USA

EXTENDED ABSTRACT

Theories of inter-attitude relationships and attitude change have failed to identify the architecture of inter-attitudinal structures and then clarify its relationship to attitude and belief change. Such a failure is critical to consumer researchers for whom understanding attitudes is a primary pursuit. This theoretical study examined two competing models of inter-attitudinal structure that explicitly address the influence of inter-attitudinal structure on attitude change dynamics: a hierarchical model (Hunter, Levine, Sayers, 1976, 1984; Poole and Hunter, 1979) and the Galileo spatial-linkage model (Woelfel and Sattiel, 1988; see also Kaplowitz & Fink, 1988; Woelfel & Fink, 1980). The results should inform consumer attitude research and lead to more accurate measurement of consumer attitudes, as well as to the production of more effective persuasive messages.

Each of the models in the study posits an inter-attitudinal structure that makes a number of predictions regarding how attitude change occurs between and among associated concepts. In a hierarchical model, a change in attitude toward a concept in a hierarchy is hypothesized to be constrained by the structural relationships of the hierarchy (i.e., one's attitude towards animals in general is not affected by a change in one's attitude towards dogs). In the Galileo spatial-linkage model such constraints are loosened and it is hypothesized that attitude change toward any concept in a group of linked concepts will result in absolute change across all linked concepts.

The between-subjects experiment in this study presented participants with pictures of either an *explicit* hierarchy (i.e., one that consists of concepts that are super- and subordinate to each other as a result of their denotative meanings) or an *implicit* hierarchy (i.e., one that consists of concepts that are not obviously super- and subordinate to each other as a result of their denotative meanings; however, when people are asked to organize a set of concepts that form such a hierarchy, the super- and subordinate relationships emerge) and then measured participants' attitudes after they processed a persuasive message. To accomplish this, three hundred ninety-one students enrolled at a large eastern university were randomly assigned to one of 26 questionnaire conditions: 2 (Hierarchy: explicit vs. implicit) x 2 (Priming: primed vs. unprimed) x 3 (Persuasive Message Target: Superordinate concept vs. Subordinate Concept 1 vs. Subordinate Concept 2) x 2 (Question Order: ascending vs. descending) plus two control groups. They were exposed to the randomly assigned hierarchy exposure and priming conditions and consequently administered the questionnaire. Additionally, prior to the study, ten pilot studies ($N=271$) had been conducted that determined the content of the explicit and implicit hierarchies and the measurement instrument used in the study.

Adjusted geometric mean distances among nine experimental concepts as measured in the questionnaire were input into the Galileo computer program V56 (Woelfel, 1993). This generated 14 multidimensional spaces, one for each of 2 x 3 x 2 experimental conditions plus two controls. The program rotated each space to the same orientation and transformed it to a least-squares best fit so that the spaces could be similarly aligned and visually compared. The first two dimensions in each space accounted for at least 79% of the variance of the real space involved as per Miller's (1988) procedures to check the reliability of the paired-comparison judgments.

Thus, the true spaces were very close to two-dimensional and the generated spaces were relatively accurate representations of the arrangements of their respective concepts. This "true" two dimensionality increased the validity of conclusions drawn from examinations of the graphs, however, supplemental analyses of variance and structural equation modeling offered additional support.

Analyses of the multidimensional cognitive spaces show that linguistic organizational structures influence attitude change. However, it is the Galileo spatial-linkage model that provides a theoretical structure which makes the more correct set of predictions about how concepts affect one another. The results also support the spatial-linkage model's suggestion that such inter-attitudinal change is constrained less by a concept's relative position in the structure and more by the strength of the concept's association with other concepts in that structure. Furthermore, within these inter-attitudinal structures, concepts directly targeted by a persuasive message often exhibit less attitude change than related concepts.

The results hold several important implications for consumer researchers, and should lead to more accurate measurement of consumer attitudes, as well as to the production of more effective persuasive messages across consumer influence areas. First, the results support the Galileo model's operationalization of a process of inter-attitudinal influence that has been previously described but for which no consistent cognitive mechanism has been suggested. For example, Converse's (1964) renowned and popular discussion of belief systems in mass publics proposes that people's attitudes and beliefs are enmeshed in a greater network of peculiar, often irrelevant, ideas that exert influence over the network. The Galileo spatial-linkage model provides a model of cognitive processing that explains why such influence occurs. Moreover, because the model suggests that this influence is not uncommon, support for the Galileo model as demonstrated in this study also suggests that consumer attitude researchers should pay more attention to the seemingly irrelevant attitudes that might provide access to a difficult to reach attitude of interest.

Because the results suggest that it is possible to affect attitudes indirectly, there are tremendous implications for those in the applied consumer research field who design persuasive messages about sensitive topics (e.g., obesity, debt). For example, the results of the study suggest that talking to individuals about specific purchases, as opposed to talking about shopping in general, may be more effective as a debt counseling strategy. Moreover, simply the act of making accessible an individual's specific shopping-related cognitive space, and revealing the implicit associations to him or her, may increase the effectiveness of debt counseling by creating a new awareness of the previously unknown links and influences between attitudes and behaviors.

Portions of the conference paper presented have previously appeared in Dinauer L.D., & Fink E. L. (2005). Inter-attitude structure and attitude dynamics: A comparison of the hierarchical and Galileo spatial-linkage models. *Human Communication Research*, 31, 1-32.

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