The Significance of Graded Structure to Understanding Marketing Strategy and the Implications for Business Relationships

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There is not a universal view on the definition of a relationship, or a business relationship. Marketing has utilised personal relationship models as analogies for the business-to-business relationships. The appropriateness of these metaphors is not clear. Marketers have also used the business-to-business definition of a relationship to define business-to-consumer relationships. Clearly, there are substantial differences not necessarily captured in formal definitions.

It is possible, according to studies in the psychology literature that relationships might also be understood as operating along a continuum with some kinds of relationships being characterised as 'good' and others as 'bad' and others in-between, and none being fully described by formal definition (Fehr and Baldwin 1996).

The idea that some kinds of relationships are better than others gives rise to the notion of categories, or examples of relationships, as having a graded structure. By this it is meant that it is possible to order the membership of categories in terms of the best, or most typical exemplars of the category to the worst, or most atypical exemplar of the category. Graded structure refers to the fact that there is a continuum of category representativeness, beginning with the most typical members (or exemplars) of a category and continuing to those members that are atypical and onto those that are not similar in the least to the category members (Barsalou 1987). A Robin or Sparrow could be considered to be a typical member of the category 'bird'. A Penguin might be considered to be atypical. The Platypus might be considered to be a non-member of the category despite the fact that it shares a couple of features with other members of the category, namely having a beak, and laying eggs.

Common taxonomic categories, such as fruit and furniture have a graded structure (Rosch and Mervis 1975, Rips, Shoben and Smith 1973; Rosch, 1973, 1975, 1978; Smith, Shoben, and Rips, 1974). Graded structure is characteristic of formal categories such as odd numbers and squares (Armstrong, Gleitman, and Gleitman, 1983). Graded structure also applies to linguistic categories such as phones and phonemes and to syntactical categories (Lakoff, G., 1986). Graded structure also exists for goal-derived categories such as things to eat on a diet (Barsolou, L.W., 1985), and is associated with ad hoc categories, such as ways to avoid being killed by the Mafia (Barsalou 1985).

The graded structure of categories is associated with how long it takes someone to categorise something as a member of a category, with typical items being identified more quickly than atypical items (Rosch and Mervis, 1975). When individuals were asked to produce or recall examples of categories, typical exemplars were generated more often than atypical ones

(Barsalou 1987). Typical members are generated more often than atypical members of categories (Barsalou 1983) are. Graded structure is associated with the ease of category learning, with typical members being easier to acquire than atypical ones (Rosch and Mervis 1975).

In addition to being graded structures, natural categories can also be regarded as 'fuzzy sets'. By this it is meant that there is no clear boundary between members and non-members of a category. Rather, membership of a category is a matter of the degree in which exemplars at the extreme of degrees of membership are either (clearly) members of non-members of a category. In the middle are those exemplars that are difficult to classify. The notion of categories as being fuzzy is consistent with natural categories having an internal structure based on typicality, or the degree to which exemplars are members of a category (McCloskey and Glucksberg 1978).

Central tendency information plays a key part in determining the graded structure of categories. Central tendency information is modal or average property information that is abstracted from exemplars of categories as one very representative (or prototypical) exemplar, or as several exemplars or as a 'bundle' of correlated properties that represent the important relationships within the category. An example of central tendency information is 'family resemblance' in which membership, and typicality, in a category is determined by the number of features that an instance shares with other members of a category (Rosch and Mervis 1975). The greater number of features that a particular exemplar shares with other members of a category the more typical it is of the category.

The relationship to an ideal is also an important determinant of a category's graded structure in goal-derived categories. Where, for example, a goal is to reduce weight, a food with zero calories would represent the ideal in terms of property information (Barsalou 1987).

Frequency of instantiation, or how often an exemplar is perceived to represent a category is also an important determinant of category gradedness. If an Australian is asked to think of a politician it is likely that he or she will think of John Howard simply because he is frequently in the public mind and very likely popular in conversation when the subject of politics is discussed.

Central tendency information explains graded structure in common taxonomic categories (Rosch and Mervis 1975, Hampton 1979); it explains graded structure in formal categories (Barsalou 1987). The graded structure of categories is also explained in linguistic categories (Lakoff 1986). Central tendency information explains the graded structure of some instances of abstract categories (Hampton 1981) and in the case of the graded structure of personality types (Cantor and Mischel 1977).

The frequency with which an instance together with its property information is retrieved is also able to account for graded structure across categories. Frequency related information could be accessed with other property information that is relevant to a particular concept and stored with typicality ratings (Barsalou 1987).

Property information captured in 'ideals' explains the graded structure of goal-derived categories (Barsalou 1987). Central tendency information does not predict graded structure in goal-derived categories (E.g. what to eat on a diet), although ideals (E.g.

zero calories) can predict graded structure in both goal-derived and common taxonomic categories. Frequency of instantiation accounts for graded structure in goal-derived and taxonomic categories, although familiarity with a category did not appear to play a role (Barsalou 1985).

Some work has been done to understand the phenomenon of gradedness of categories in marketing. Viswanathan and Childers (1999) showed that family resemblance accounted for the graded structure across a variety of product categories such as fast-food restaurants, athletic shoes, candy bars and alcoholic beverages. However, in another study, the typicality of brands that were considered to be representative of news and business magazines was accounted for by personal preference, brand awareness and liking (Nedugadi and Hutchinson 1985) rather than central tendency information.

Different determinants affect category gradedness in different contexts. Central tendency information might affect a category's graded structure in one context and ideals in another (Barsalou 1987).

Context emerges as an important intervening variable in explaining the graded structure of categories. Long-term experience with a category appears to be encoded in long-term memory as either central tendency information, or ideals, or frequency of instantiation information. It is thought that information encoded into the above determinants of category structure change relatively slowly over time (Barsalou and Medin 1986. Current contexts result in different orderings of exemplars for the same category at the time that they are experienced. In the linguistic context, a cow or goat are typical of the category 'animal' in the context of milking; whereas horse or mule are typical in the context of riding (Barsalou 1987). The 'point of view' context takes that of different populations. The way in that individual's points of view are different in different populations will influence the gradedness of a category. Australians and Chinese will very likely have different notions of what would constitute typical examples of the category 'bird' from the point of view of their own cultures.

Concepts capture information that individuals use to understand the world around them (Hampton and Dubois 1993). The notion of concepts is an important one in that it incorporates property information about the exemplars that make up categories. The difference between concepts and categories is taken up in the difference between a concept's intensions and its extensions. A concept's intensions consist of property information that is used to classify something as a member of a category (Hampton and Dubois 1993).

In their study of natural categories as fuzzy sets, McCloskey and Glucksberg (1978) reported high within and between subject agreement with respect to exemplars with very high and very low degrees of category membership (i.e. highly typical and highly atypical exemplars). A high degree of disagreement was only evident for those exemplars in the intermediate or middle range of typicality, where membership was not clear.

Barsalou (1987) reported that a given person's graded structure would correlate at around 0.45 with another person's graded structure for common taxonomic, goal-derived and ad-hoc categories across a wide range of points of view. He also made the

suggestion that agreement would be likely to increase substantially as subjects within a sample became more homogeneous.

Methodological approaches to the study of graded structures have addressed intensional (property information) aspects and extensional (category information) aspects of concepts (Hampton and Dubois 1993). Subjects that have been involved in the study of concepts (both intensional and extensional aspects) have been asked to follow an approach similar to the one outlined below:

- Exemplar Generation: Subjects are asked to generate examples of a particular concept. In the context of this paper, subjects would be asked to generate examples of Positioning, Segmentation, or other concepts that are central to marketing strategy.
- Typicality Rating: Subjects in this phase are asked to rate each example in terms of how typical they think it is of the category. If someone said 'A Corner Shop' was an example of Positioning, then it would be rated to the extent that it was typical (or atypical) of the concept on an appropriate scale (ie. A five, seven, or ten point scale with the highest number on the scale, for example, representing the highest level of typicality).
- Feature Generation: Subjects in this phase are asked to generate features that they think best describe a particular concept. They could, for example be asked to generate features that best describe their idea of Positioning. These could well be values along a range of attributes (Eg 'next to the paper shop' for the attribute 'location').
- The final phase relates features to examples. Subjects in this phase are asked to score the degree to which a feature is salient for a particular example of a concept. The relationship between examples and features generates the statistical data by which central tendency information, ideals, or frequency information can be generated to explain graded structure depending on the kinds of categories being studied.
- Work done on categories as graded structures and the role of context seems to suggest a possible framework by which to understand how organisations in business relationships might work together. The implications from the literature in cognitive psychology, in particular, related to theories of concepts seems to suggest the following implications that might be worthy of further study:
- The graded structure of categories appears to be accounted for by three major determinants, namely centralised information, ideals and frequency of instantiation. Each of these accounts for unique variance effects in a variety of taxonomic, goal-derived and ad-hoc categories.
- There appears to be greater agreement on graded structures within homogeneous population than in disparate ones.
- From the above it would seem that the closer a relationship, the greater the agreement on the content of categories reflecting partner's relative experiences of marketing strategy.
- Although no work seems to have been done on the subject, it would seem to be a reasonable supposition that if partners in a business relationship share similar experiences as captured in the convergence in the content of shared categories, then there should be greater satisfaction in the relationship.

The intention of the current research is to explore relationships as context. The forthcoming studies will examine long-term context as embedded in central tendency information, ideals, and frequency of instantiation. Current context will be studied in

the way in which individuals use language and how point-of-view influences the structure of concepts.

Relationships will be studied in terms of their impact on graded structure amongst advertising agencies and their clients. The literature seems to suggest that the closer the relationship, the greater the amount of correspondence there should be in the contents of categories generated by each partner in the relationship.

The correspondence between the content of categories in clos(er) relationships points to the idea that partners in such a relationship will communicate better than those in more distance ones, and lead to greater satisfaction in the relationship.

Concepts and categories are central to the way in which individuals learn, retrieve examples from memory and make inferences. A later stage of the current research will examine the way in which graded structure affects the way in which individuals learn strategy.

An extension of a study of abstract categories (Hampton 1981) is currently underway. This study examines the structure of concepts that are central to marketing strategy, namely segmentation, targeting, differentiation and positioning. The study includes the more general marketing/business strategy concept of competitive advantage. It is anticipated that the results of this study will be available for presentation at the conference.

Research, over the balance of the current year, and next year, will involve the use of focus group to generate examples of marketing strategy in taxonomic and goal-derived categories. In a later phase, the current program will endeavour to explain the graded structure of such categories using central tendency information, ideals and frequency of instantiation as determinants. The final phase of the program will examine the relationship between graded structure of concepts that are central to marketing strategy, and learning.

This paper represents an initial step in a process that hopes to present another way of looking at business relationships. In particular the study attempts to understand the extent to which the closeness of the relationship as well as the satisfaction with the relationship are bound by the correspondence in the graded structure of categories generated by partners in the relationship

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