Riley, P., & Hollihan, T. A. (1982). *Paradigms as Erisitic.* Paper presented at the annual meeting of the Speech Communication Association, Louisville, KY.

Rosenfield, L. W. (1983). Ideological Miasma. *Central States Speech Journal, 34,* 119-121.

Rowland, R. C. (1982a). Standards for paradigm evaluation. *Journal of the American Forensic Association, 18,* 133-140.

Rowland, R. C. (1982b). The primacy of standards for paradigm evaluation: A rejoinder. *Journal of the American Forensic Association, 18,* 154-160.

Rowland, R. C. (1985). On argument evaluation. *Journal of the American Forensic Association, 21,* 123-132.

Sproule, J. M. (1979). Debating and judging: The interaction of variables. In D. Thomas (Ed.), *Advanced debate: Readings in theory, practice and teaching* (pp. 364-368). Skokie, IL: National Textbook.

Theobald, J. M., & Weitzel, A. R. (1986, February). *Conflicting critical postures applied to recent films on nuclear consequences.* Paper presented to the annual convention of the Western Speech Communication Association, Tucson, AZ.

Ulrich, W. (1982). Flexibility in paradigm evaluation. *Journal of the American Forensic Association, 18,* 151-153.

Ulrich, W. (1983). The influence of the judge on the debate round. In D. Zarefsky, M. O. Sillars, & J. Rhodes (Eds.), *Argument in transition: Proceedings of the Third Summer Conference on Argumentation* (pp. 871- 881). Annandale, VA: Speech Communication Association.

Ulrich, W. (1984). An *Ad hominem* examination of hypothesis-testing as a paradigm for the evaluation of argument. *Journal of the American Forensic Association, 21,* 1-8.

Wander, P. C. (1983). The ideological turn in modern criticism. *Central States Speech Journal, 34,* 1-18.

Wander, P. C. (1984). The third persona: An ideological turn in rhetorical theory. *Central States Speech Journal, 35,* 197-216.

Zarefsky, D. (1982). The perils of assessing paradigms. *Journal of the American Forensic Association, 18,* 141-144.

A COGNITIVE MODEL OF EVALUATIVE JUDGMENTS

Don Brownlee and Mark Woolsey
California State University—Northridge

During the past decade arguments have been advanced for several models of decision making by debate critics. Ranging from the judge as hypothesis tester to policy maker, the various judging paradigms describe how the debate ought to be evaluated. They prescribe the critic's behavior. These paradigms are imposed from outside the context of the debate and intended to alter the activity of the judge, not the debaters. The advocates of these paradigms assume that decision making by the critic can be adjusted at will, that paradigm selection is voluntary activity. For example, Rowland (1984) suggests "the judge should choose that paradigm which best serves the teaching function" (p. 183). To Rowland, the power to decide upon paradigms is within the purview of the critic.

This article contends that a descriptive perspective, based on a model of cognitive activity, is both appropriate and useful in understanding the rhetorical aspects of interscholastic debate. A model of the thought processes of the judge more clearly identifies the argumentative burdens that naturally belong to debaters. This descriptive approach is not meant to replace prescriptive suggestions, but rather to recognize how debate critics do operate within the round.

This article begins with an exploration of two important concepts—categorization and prototypes—produced by theorists in cognitive psychology. The potential role of these factors is then applied to decision making by debate critics on issues of topicality. Topicality was selected to limit the exploration to one prominent decision making issue. The article concludes with the implications of this model for the argumentative strategies of debaters.

Cognition and Evaluative Judgment

Categorization

A major focus of cognitive theorists during the past two decades has been on the process of categorization. Though agreement is not universal on this point, many have accepted categorization as a fundamental unit of thought, the manner in which all stimuli are organized. At a minimum, categorization appears to be central to the interpretation of language. Michael Billig (1987) addressed the pivotal position of this concept:

> (T)he notion (is) that as thinkers we impart meaning by categorizing the information which our senses provide. Accordingly, cognitive theorists in social psychology have tended to assume that categorization is a basic unit of thinking. At its simplest level, categorization involves the placing of a particular

object, or entity, within a general category. . . . This is something that we do all the time, when we use language to make statements about entities. (p. 121)

We categorize when we claim that "daggers are weapons," and we further categorize when we follow by saying that "weapons are used to hurt people." Categorization gives meaning to all human discourse.

Categorization is based on judgments of similarity. As Mervis and Rosch (1981), noted: "A category exists whenever two or more distinguishable objects or events are treated equivalently"(p.89). When, in addition to daggers, we also treat handguns as weapons, we place both entities in a common category called "weapons." The categorization of both daggers and handguns is based on the objects' perceived similarities. By serving this role, Mervis and Rosch label categorization "as one of the most basic functions of living creatures" (p. 89).

Categorization is not limited to the evaluation of objects. People categorize uses, actions, or concepts "too abstract to be imaginable" (Goldberg, 1986, p. 324), and they appear to do so in the same manner in which they categorize objects, by identifying similarities. As Rifkin (1985) concluded, "people apply a similar categorization process to events, scenes, and objects for organizing featural information within these domains" (p. 541).

Categories rarely possess clearly defined perimeters. While daggers and handguns can both easily be classified as weapons, a similar judgment about rubber bands or shoes will be more complicated. Despite similarities among the mentioned objects, most individuals would not find them sufficient to make a mutual categorization. Instead of distinct categories, McCloskey and Glucksberg (1978) contend that "natural categories are fuzzy sets, with no clear boundaries separating category members from non-members" (p. 462). Rosch (1978) suggests that all ordinary language categories will be fuzzy edged, without precise borders. Membership in a category becomes "probabilistic rather than discrete" in the view of Wiggins (1985, p. 627).

Prototypes

Cognitive categories are best represented in the mind through categorical prototypes. Cantor, Mischel and Schwartz (1982) suggest that individuals develop a prototype and that the "prototype captures the meaning of a category. The prototype serves as a symbol and reference point for the category" (p. 46). The prototype has been variously equated with "best example" (Neumann, 1977 p. 187), "representative exemplar" (Billig, 1987, p. 147) and "idealized representative" (Pavitt, 1982, p. 212).

Prototypes, according to Rosch (1977), serve as a principal defining feature of categories. Rosch elaborates on the research findings:

... categories are maintained as discrete categories by being coded in cognition in terms of prototypes of the most characteristic members of the category. That is, many experiments have shown that categories are coded in the mind neither by means of lists of each individual member of the category nor by means of a list of formal criteria necessary and sufficient for category membership but, rather, in terms of a prototype of a typical category member. (p. 213)

Our comprehension of the category comes from the prototype, not from a set of characteristics defining that category. For example, the category "bird" may be better understood by the prototype "robin" than by a list of criteria or descriptors that includes (a) warm-blooded vertebrate, (b) covered with feathers, (c) having wings, etc.

The prototype is the starting point for later judgments on the contents of a category. Establishing such starting points and making adjustments from those points is central to Slovik and Lichtenstein's (1971) theory of evaluative judgment. "Individuals often make decisions," argue Huber, Neale and Northcraft (1987), "by starting from an initial position and adjusting from that position to yield a final judgment" (p. 151). If the adjustment from the category starting point to the object of evaluation is minimal, then the object will be viewed as a member of that category.

Whether a creature is classified as a bird is more a function of perceived similarities to the prototype, a robin, rather than whether the creature possesses certain specific traits. If the necessary adjustment from the prototype robin is small, the creature will be evaluated as a bird. Pavitt (1982) proposed exactly this decision making process when he claimed that "judgments of the 'goodness' of members of a category are made in terms of a conception of an idealized prototype" (p. 237). The identical notion was advanced when Neumann (1977) argued, "The greater the distance which separates it from the prototype, the poorer a member it is" (p. 187). As Wiggins (1985) noted previously, this is a probabilistic judgment. The greater the distance from the prototype, the less probable that the entity belongs to the prototype's category.

The concepts from cognitive psychology of categorization and prototypes provide a useful explanation for how individuals make evaluative judgments. These concepts denote how the goodness-of-fit of a member in a category is based on the degree of similarity between the member and a prototype of the category, serving as a best example.

Application to Topicality Judgments

Decisions on topicality can be examined as categorical judgments. The categories are not necessarily concrete, like "bird", but, as Goldberg (1986) previously noted, the categorization process is identical for abstract concepts. We propose that judges, in deciding whether a case is topical, compare the affirmative's conception of the topic to a topical prototype. The critic makes a holistic judgment as to the extent the affirmative's version of the topic matches the judge's prototype of the conflict suggested by the resolution.

As was noted earlier, Rosch (1978) contended that all language categories are fuzzy edged. Debate topics, as natural language categories, unquestionably possess this fuzzy, indistinct character. The boundaries that distinguish the topical or relevant case areas from non-members of the category are blurred and unclear. The judgments are probabilistic.

Serious topicality disputes will rarely concern cases that are near the center, or prototype, of the topical category, assuming all participants share that prototype. (Of course, any argument may be presented for strategic reasons, to divert the focus of argumentation or to consume time.) In support of Rosch's claims about prototypes, Billig (1987) maintains that "when we deliberate about the outer edges, we refer to the degrees of similarity to the prototypical examples at the centre. This process assumes that the centre of the concept is not the locus of dispute" (p. 147).

Consequently, most topicality argument involves cases that the negative debaters consider suitably distant from the center of the topic as they perceive it or as they believe the judge perceives it. The question facing the judge is whether the affirmative case is a sufficiently good example of the resolution that it should be given jurisdiction for discussion or ultimately receive the judge's assent.

If the model of evaluative judgment developed by the cognitive psychologists is to be accepted, the judge evaluates the affirmative case by comparing it to a personal resolutional prototype. The final decision of topicality depends on whether the judge has been convinced that the affirmative case is sufficiently close to the prototype. The role of external topicality criteria will not be instrumental in this process.

While no studies have been conducted to prove that debate judges operate in this fashion, there is evidence that general judgments on communication competence follow this cognitive model. Research by Pavitt and Haight (1985) concluded that individuals' idealized prototypes of the competent communicator were used for the evaluation of specific communicators. Corroborating this finding in a later investigation, Pavitt and Haight (1986) declared: "There is good reason to suppose that a perceiver-oriented approach . . . is the most profitable alternative available for studying the process of competence evaluation" (p. 232). We argue that a similar descriptive, critic-oriented perspective best explains the process of topicality evaluation.

Implications for Argument Strategy

To respond to this altered view of debate critic decision making, debaters must modify their argument strategies. The focus of topicality argumentation will need to shift from demonstrating that the case fulfills certain arbitrary resolutional standards to establishing links between the case and a resolutional prototype. Rhetorical tactics that elicit cognitive links between concepts serve this purpose.

Though it is beyond the intent of this article to explicate all such tactics, we would suggest that case and prototype can be linked through at least three types of connections —logical, language, and affective. Each type of connection will be described and examples of their use provided.

Logical connections establish similarity by indicating that the case and prototype share either a sufficiently large number of attributes and/or a set of particularly salient attributes. The affirmative identifies a prototypical case, arguably acceptable to all critics, and then demonstrates that the vital characteristics of that case are wholly

embodied in the affirmative interpretation. Logically, if they share the same salient descriptors, they must exist in the same category.

An example of logical connections comes from the Fall 1981 CEDA resolution "that unauthorized immigration into the United States is detrimental to the United States." An affirmative attempting to prove the resolution by arguing that entry into this country of viruses, such as AIDS, threatens our nation would likely need to defend the case's topicality. Such defense could include the claim that both viruses and illegal aliens swimming the Rio Grande, a prototype case, share the same important characteristics— (a) they are living organisms and (b) they can reproduce. If the two cases are so identical, then logically they must share the same topical category of "unauthorized immigration." The negative's responses would focus on the failure of viruses and the prototype case to share a long list of other important similarities.

Labeled by Bennett and Feldman (1981), as "the most powerful means of establishing relationships"(p. 52), language connections can merge case and prototype into the same category. Politicians and government representatives have long recognized that the language selected to describe an event determines how that event is categorized. Whether Israel "occupies" or "administers" the West Bank and Gaza Strip determines into which category the action falls, whether it is closer to our prototype of hostile military domination or our prototype of benevolent management.

Objects, events, and actions all may evoke emotional reactions. If the emotional response to the case matches the emotional dimension of the prototype, then the two will be linked by an affective connection. Research on consumer purchasing demonstrated that new brands are evaluated on the basis of "the affect associated with the activated category" (Walker, Swasy & Rethans, 1986). It seems that the strength of an affective connection would not be sufficient by itself to support most topicality arguments, but it would reinforce logical or language connections.

The Fall 1985 CEDA topic concerned restrictions on media coverage of terrorist activity. Terrorism unquestionably engenders emotional reactions. An affirmative team might defend the resolution by arguing that cigarette manufacturers are terrorists and, consequently, there is value to restricting the advertising of cigarettes. The fear of cancer is compared to the fear of bombings. If Abu Nidal and Philip Morris create the same affective response in the critic, then they are both more likely to be placed in the category of terrorist. Negatives might seek to distinguish the sudden fear posed by terrorists from the lingering threat created by the fear of cancer.

While logical, language and affective connections do not exhaust the means of linking two entities within one's cognition, they illustrate the potential avenues open to the debater. By carefully selecting topicality arguments that promote such connections, the advocate is more likely to gain adherence from the critic.

Conclusion

Arguments over how critics should evaluate debate rounds have abounded during the past decade and unquestionably they will continue. Several judging paradigms have

been proposed. The education of judges through such prescriptive means is a worthwhile objective, particularly if it advances the instructional purposes of interscholastic debating.

This article proposes an alternative descriptive model to depict the thought processes of the critic, at least in terms of topicality judgments. A variety of other types of judgments—on the interpretation of evidence, on the credibility of sources, on the balancing of competing values, etc.—should also be the focus of further investigations. Categorization and prototypes do not necessarily explain these decisions. The more debaters understand about the critic's cognitive processes, the better they can adapt to the rhetorical situation in the round.

There may be fears that any emphasis on the judge's decision making process will legitimize pandering to the idiosyncracies of the critic. Such concern is misdirected. Any approach to forensics education that divorces the construction and presentation of argument from considerations of audience fails to prepare students for the reality of communication. Explaining to debaters why arguments that convince one critic flounder with another can only make the activity of debate more meaningful.

This perspective does not compete with the prescriptive paradigms, but it does imply that certain reasoning patterns naturally occur in evaluative considerations. Whether the critic can alter these fundamental cognitive processes in pursuit of a revised decision making paradigm is questionable. Consequently, argumentation scholars should earnestly attend to this and other thought patterns that may be inherent to evaluative judgment.

References

Bennett, W. L., & Feldman, M. S. (1981). *Reconstructing reality in the courtroom.* New Brunswick: Rutgers University Press.

Billig, M. (1987). *Arguing and thinking: A rhetorical approach to social psychology.* New York: Cambridge University Press.

Cantor, N., Mischel, W., & Schwartz, J. (1982). A prototype analysis of psychological situations. *Cognitive Psychology, 14,* 45-77.

Goldberg, L. R. (1986). The validity of rating procedures to index the hierarchical level of categories. *Journal of Memory and Language, 25,* 323-347.

Huber, V., Neale, M., & Northcraft, G. (1987). Judgment by heuristics: Effects of ratee and rater characteristics and performance standards on performance-related judgments. *Organizational Behavior and Human Decision Processes, 40,* 149-169.

McCloskey, M., & Glucksberg, S. (1978). Natural categories: Well defined or fuzzy sets. *Memory and Cognition, 6,* 462-472.

Mervis, C. B., & Rosch, E. (1981). Categorization of natural objects. *Annual Review of Psychology, 32,* 89-115.

Neumann, P. (1977). Visual prototype formation with discontinuous representation of dimensions of variability. *Memory and Cognition, 5,* 187-197.

Pavitt, C. (1982). Preliminaries to a theory of communication: A system for the cognitive representation of person and object based information. *Communication Yearbook, 5,* 211-232.

Pavitt, C., & Haight, L. (1985). The 'competent communicator' as a cognitive prototype. *Human Communication Research, 12,* 225-241.

Pavitt, C., & Haight, L. (1986). Implicit theories of communicative competence: Situational and competence level differences in judgments of prototype and target. *Communication Monographs, 53,* 221-235.

Rifkin, A. (1985). Evidence for a basic level in event taxonomies. *Memory and Cognition, 13,* 538-556.

Rosch, E. (1977). Classification of real-world objects: Origins and representations in cognition. In P.N. Johnson-Laird & P.C. Wason (Eds.),*Thinking: Readings in cognitive science* (pp. 212-222). New York: Cambridge University Press.

Rosch, E. (1978). Principles of categorization. In E. Rosch & B. Lloyd (Eds.), *Cognition and categorization* (pp. 27-48). Hillsdale: Lawrence Erlbaum.

Rowland, R. C. (1984). The debate judge as debate judge: A functional paradigm for evaluating debates. *Journal of the American Forensic Association, 20,* 183-193.

Slovik, P., & Lichtenstein, S. (1971). Comparison of Bayesian and regression approaches to the study of information processing in judgment. *Organizational Behavior and Human Performance, 6,* 649-744.

Walker, B. A., Swasy, J. L., & Rethans, A. J. (1986). The impact of comparative advertising on perception formation in new product introductions. *Advances in Consumer Research, 13,* 121-125.

Wiggins, J. S. (1985). Interpersonal circumplex models: 1948-1983. *Journal of Personality Assessment, 49,* 626-631.