Category Theory Applied to Trademark Law: Cognitive Economy as the Paramount Goal in Genericism Cases

Susan M. Richey

Overview

The first task for the fact-finder in a genericism case is to define the category, i.e., the genus, of goods or services at issue. Use of the word "genus" is not accidental. Traditionally, courts analogize product or service categories to the classical taxonomy of living organisms: the product or service at issue is the "genus" and any trademark used by a particular provider of that good or service designates a "species" within the genus. A genus is the equivalent of a generic term which may not be protected under the trademark laws whereas a species equates to a brand that may have trademark significance. Judicial resort to classical taxonomy to define product or service categories, however, becomes suspect in light of the past several decades of research in the discipline of cognitive psychology that points strongly to more organic category systems. In fact, category theory builds from the notion that human beings utilize category systems in a biologically-driven quest for cognitive efficiency, a goal that underlies the law's refusal to protect generic terms as trademarks. Indeed, the legal standard—whether the principal significance of the disputed term to the relevant purchasing public is as the name of the genus—presupposes the importance of human cognition in a genericism case.

The Genus/Species Test in Genericism Cases

Courts frequently cite the need to promote efficient commercial speech when declining to protect generic terms as trademarks. Competitors need to be able to communicate the fact that they compete with one another to consumers and that can only occur where the generic term for a product or service category is free for all to use. Without that freedom, competitors must use convoluted, possibly abstruse, language to describe what they seek to sell. The purchasing public becomes disadvantaged because such communication will likely confuse rather than clarify consumer choice, and fair competition becomes hindered by allowing a single competitor to exercise dominion over the one clear term that describes its product or service category.

Although the genus/species distinction in genericism cases continues in wide use today, it provides little direction to the fact-finder defining the genus in the first instance. Courts determined to apply classical taxonomy to trademark law often designate the product or service category with little or no explanation as to how the court settled on the designation. Ironically, this cavalier approach can result in a genericism case being won or lost depending upon how broadly or narrowly a court defines the genus. Consider, for example, the district court's discussion of this strategy in *Nat'l Nonwovens, Inc. v. Consumer Prods. Enters., Inc.*, 397 F.Supp. 2d 245 (D. Mass. 2005), in which defendant challenged plaintiff's mark "WoolFelt" as the generic term for a line of textiles made

from felted wool. The court noted plaintiff's contention that the generic term for the goods is at a more abstract level, i.e., "fabric," or "felt" and, therefore, that any number of descriptive terms, including "wool," may be added, rendering the entire phrase capable of trademark protection. Thus, it falls within the plaintiff's best interest to designate a genus at a higher level of abstraction so that more terms can fit within the category as species or potential brands.

Occasionally, a court employs the cross-elasticity test from antitrust law to define the genus at issue. The test inquires whether or not the plaintiff's goods or services are reasonably interchangeable with those of another merchant for the same purposes and, if so, then the court treats the goods as competing products in the same product category. The difficulty with using this test arises when a trademark enjoys great commercial success. Simply put, loyal consumers may not view identical offerings from other producers to be interchangeable. In such an instance the popularity of the trademark might place its goods or services in a category by themselves, rendering the mark vulnerable to attack as generic if consumers come to view it as the name of the good/service category itself.

Category Structure in Cognitive Psychology

Modern category theory from cognitive psychology could provide courts a model with which to approach determination of the genus. In the mid-1970s, cognitive psychologist Eleanor Rosch theorized that individuals categorize objects or experience in their world as part of a natural cognitive process and do not rely on abstract definitions of categories, i.e., classical taxonomies, which she characterized as feats of the imagination. Rosch argued that human beings utilize categorization in order to conserve finite cognitive resources; in other words, incorporating objects or human experience into a category structure provides the perceiver with maximum information about the world through an expenditure of the least cognitive effort.

Rosch posited that category systems exhibit both a vertical and a horizontal dimension. The vertical aspect runs from the superordinate or most inclusive, i.e., the most abstract level of thought, to the basic level at which most objects generally are recognized easily, to the subordinate level or the level of most detail and least inclusiveness. Consider the following examples:

Superordinate Level	Animal	Furniture
Basic Level	Cow	Chair
Subordinate Level	Guernsey, Holstein, Jersey	Rocker, Recliner, Desk chair

The horizontal aspect concerns the segmentation of categories at the same level of inclusiveness, thus "chair," "sofa," and "table," all occupy the same basic level but represent distinct categories that do not share category members. Both the vertical and the horizontal dimensions work to promote cognitive efficiency.

Research shows that not all levels of categorization on the vertical continuum are equally useful and the level of maximum utility is the basic level. When experimental subjects are shown pictures of objects, they classify them first and most quickly at the basic level, and they reliably use the same common name for that level. The basic level can shift in response to the perceiver's expertise. For example, the basic level for dairy farmers will not be "cow," as for most people; it will be "Guernsey," "Holstein," or "Jersey." Context may also affect the basic level: a shopper in an antique furniture store might view the basic level category to be "Victorian settee" as opposed to simply "chair." Individuals categorize objects at the basic level because it is not so diffuse and abstract as to lack cognitive utility, as for example, "animal," or "furniture," but at the same time, the basic level does not slow cognitive processing by requiring distinctions between closely-related categories, e.g., "rocker" and "recliner," that share many of the same attributes.

Research also suggests that human beings segment the basic level into discrete categories along a horizontal dimension for ease of cognitive processing. Categories at the basic level vary from categories at the subordinate level in the following manner: "cow," "pig," and "chicken," although all farm animals, are more different than they are alike, that is, they have far fewer attributes in common than they have attributes that are different. Individuals place things in basic level categories based upon a cluster of attributes—objects that display all or most of the cluster will be in the same category. An object that displays a few of the cluster attributes but not all of them may hover somewhere between two clusters of attributes or categories. In order to cope with fuzzy boundaries between basic level categories, human beings compare a given object with what their experience tells them is the best representative or prototype of the category in question. For example, if "robin" is seen as a prototype of the category "bird," individuals may view ostriches as outside the bird category because they do not fly or chirp. In order to create strong distinctions between basic level categories, human beings conceive of a category, not it terms of its fuzzy boundaries, but rather in relation to the category's clearest cases.

Implications of Category Structure for Genericism Cases

For many years, marketing experts and brand managers have employed Rosch's work and that of other cognitive psychologists in their quest to position products either in established product categories or as entrants into entirely new product categories. Despite use in this context, courts have yet to seize upon modern category theory when struggling to define the product category or genus in a genericism case.[*]

A merchant's ability to easily and accurately communicate the nature of its goods to the consumer and the consumer's ability to quickly and easily comprehend that communication underlie the law's refusal to grant trademark status to a generic term. Because cognitive efficiency is a paramount goal in determining which terms are generic,

[*] Although Rosch's work involved categorization of objects and human experience, it applies most easily to product categories in trademark law. Hence, this paper focuses on modern category theory as it informs determination of the genus of products rather than services.

it is reasonable to conclude that a genus or generic term is one which names a basic level category.

The foregoing conclusion calls into question a line of case law in which courts have found sub-classifications of generic terms to be generic as well. If the sub-classifications at issue in those cases belong to the subordinate level, then they do not promote cognitive efficiency in the consumer; instead, they require greater cognitive effort on the part of the consumer due to multiple shared attributes between categories at that level and a resultant need to expend cognitive resources to distinguish between those categories.

Removing the specter of genericism from sub-classifications at the subordinate level should not disadvantage consumers or competitors. Often, sub-classifications are descriptive terms applied to the name of the basic level category, e.g., Tasty salad dressing and Honey-Baked ham. In such cases, the proponent of a descriptive mark must establish secondary meaning in order to protect it and, in any event, the doctrine of classic fair use allows competitors to use descriptive terms, claimed by others as marks, so long as they do not use them to indicate commercial origin. Occasionally, sub-classifications indicate varieties of a good, such as "fontina" for a type of cheese. If the basic level category is "cheese," "fontina" acts as a descriptive term and, logically, should be as capable of trademark significance as "Tasty" and "Honey-Baked" in the examples above. If, however, "fontina" represents a basic level category due to the perceiver's expertise or the context in which the goods are encountered, then category theory raises no challenge to the holding in these cases.

Modern category theory emphasizes the biological drive to expend as few cognitive resources as possible in receiving information about the world. Because that goal underlies the law's insistence that generic terms be free for all to use, category theory could prove a useful tool in elaborating a workable approach to defining the genus.