# Mapping Beyond Dewey's Boundaries: Constructing Classificatory Space for Marginalized Knowledge Domains

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## ABSTRACT

CLASSIFICATIONS ARE BOUNDED SYSTEMS THAT marginalize some groups and topics by locating them in ghettoes, diasporized across the system. Other marginalized groups and topics are totally excluded from these systems, being outside of their territorial limits. Because classifications are locational systems, spatial analyses borrowed from various disciplines have potential to identify and address their problems. The philosophical basis for the analysis in this article is Lorraine Code's (1995) conception of "rhetorical spaces" as sites where topics can be taken seriously as legitimate subjects for open discussion. In existing classifications, there is rhetorical space for most mainstream social and scholarly knowledge domains but not for marginalized knowledge domains. Geography offers concepts for building a theoretical framework to ameliorate the biases of classification. This article describes such a framework and how it is applied using techniques such as Gillian Rose's (1993) "paradoxical spaces," which are simultaneously or alternately in the center and at the margin, same and other, inside and outside to develop a more complex and meaningful classification for women and other marginalized groups. The project described here operationalizes these theoretical openings by applying them to the Dewey Decimal Classification as both critique and and as techniques for change.

## INTRODUCTION

The problem of bias in classification can be linked to the nature of classification as a social construct. It reflects the same biases as the culture

that creates it. Existing literature has critiqued the most widely used classification in the world, the *Dewey Decimal Classification* (*DDC*), for its treatment of women, Puerto Ricans, Chinese and Japanese Americans, Mexican Americans, Jews, Native Americans, the developing world (including Africa, the Middle East, and Melanesia), gays, teenagers, senior citizens, people with disabilities, and alternative lifestyles.[1] To look at these biases with a fresh eye, a theoretical construct capable of revealing the complexities of classification and its social construction was sought. The theoretical framework that subsequently evolved draws on the spatial metaphors that have become so prevalent in cultural criticism in recent years.

As Lorraine Code (1995) points out:

> [use of] spatial metaphors picks up a late-twentieth-century concern with location: with territories, mappings, positionings where resources are variously available, subjectivities are variously enacted, and identities are constructed and continually reconstructed in the enactings; and where hierarchies of power and privilege always contribute to shaping these processes . . . . (p. ix)

In this spirit, this discussion will move from a description of the construction of classification to the development of spatial imagery as a metaphorical mechanism with the ability to discover the processes by which powerful and privileged discourses shape information and with the potential to inform change. What will then evolve will be a multidisciplinary theoretical framework based on spatial conceptions in the context of a specific project, concluding with suggestions for further research.

## THEORETICAL MODELS FOR THE
## SOCIAL CONSTRUCTION OF CLASSIFICATION

The idea of classification as a social construct is not new. A. C. Foskett (1971) suggests that classificationists are the products of their times. Therefore, since classifications are the products of classificationists, classifications also reflect the biases of their times. Examining the ideological construction and present needs for reconstruction of the former Soviet classification (Sukiasian, 1993) or the Confucian, and later Maoist, classification in China (Studwell, Wu, & Wang, 1994) makes it easy to see that classifications reflect philosophical and ideological presumptions of their cultures and not only the times but also the places. Classifications arrange concepts according to accepted cultural discourses whether those discourses are Leninist or Maoist communisms, the Seven Epitomes of Confucian doctrine, or Dewey's apparent reversal of Francis Bacon's classification scheme.

Allocation of 80 percent of *DDC*'s religion section (the 200s) exclusively to Christianity and the existence of a separate section for American literature (the 810s) when all other literatures are arranged by language

is not surprising given the origins of this classification. Finding the topic "concubinage" under customs in 392.6 where it is gathered with topics such as chaperonage and dating or "suttee" in 393.9 and all combined with funerals and wakes has a certain ethnocentric logic. The other major North American classification, the *Library of Congress Classification* (*LCC*), exhibits similar biases. For example, the allocation of space and the sequence of development of Class K for law, with separate volumes for individual North American and European countries, was published in the 1960s and 1970s with only one volume appearing in 1993 covering Asia, Eurasia, Africa, Pacific Area, and Antarctica. In each of these cases, there is a tendency to simply accept that these powerful discourses operate, and that change is too expensive and impractical.

## In Search of a Theoretical Model

Building a theoretical framework or model to analyze and address the biases of classification in a practical way requires a model capable of revealing the complexities of classification and the discourses that construct it. Developing this framework or model requires examination of the characteristics of classification, testing various conceptions against those characteristics, and reflexively reworking the model.

Two major characteristics of classification are that it gathers similar information together and places it in proximity to related information. If there is to be only one ordering of information, then it is useful for classification to reflect the relationships perceived in the wider society. Because the relationships between concepts can be drawn in a variety of ways, classifications will give more advantageous space in the overall structure to some concepts than to others. As the literature cited earlier suggests, classification tends to reflect the most mainstream version of these relationships. Classificatory structures are developed by the most powerful discourses in a society. The result is the marginalization of concepts outside the mainstream.

Classifications are also closed systems in that they represent some concepts and not others. No classification will ever be all inclusive. Since classifications are notationally controlled vocabularies, these inevitably have limits. Legal scholar Drucilla Cornell (1992) has suggested that any system or structure has limits, and that replacing one system with another will simply define different limits rather than being all inclusive. A system of any kind is defined by what it is not and, because systems tend to be dynamic, like classifications, the definition of what the system's limits are is always deferred (p. 2). It is an instance of Jacques Derrida's deconstructive concept of *différance* that limits are constructed by their exclusions and are in a state of constant flux because they are socially constructed. The question for classification then becomes, What is left

beyond the limit? What is excluded? Given Foskett's observations on classificationists, it comes as no surprise that the limits of classifications are also constructed by the powerful discourses within a society, and that what is excluded is what is further from the mainstream.

Further, library classifications have responded to the needs of libraries to classify published works into a browsable collection. Therefore, what exists in published form will dictate, to a greater or lesser degree, what is included in a classification. Even a classification that does not limit itself to literary warrant will be irresponsible if it ignores the published record. Since what gets published is also limited by powerful social discourses, it too tends to produce a corpus largely representing mainstream thought.

The result of these factors is classification, which might be seen as a dense mainstream core of aptly juxtaposed concepts with marginal concepts scattered around the edges or not represented at all. This conjures up concentric circles of degrees of representation quality forming a distribution—similar to Zipf's, Lotka's, or Bradford's—of: a few core concepts best represented, a middle ground adequately represented, and a large periphery of poorly represented marginal concepts with some concepts outside of the limits not represented at all (see Figure 1). This image of Zipf's core of word occurrences or Lotka's core of published authors or Bradford's core of journals effectively documents the distribution of what currently exists. It also suggests the effectiveness of a spatial conception of classification. However, it does not provide a metaphor for analyzing the historical discourses that have shaped the present nor does it offer suggestions for changing the status quo.
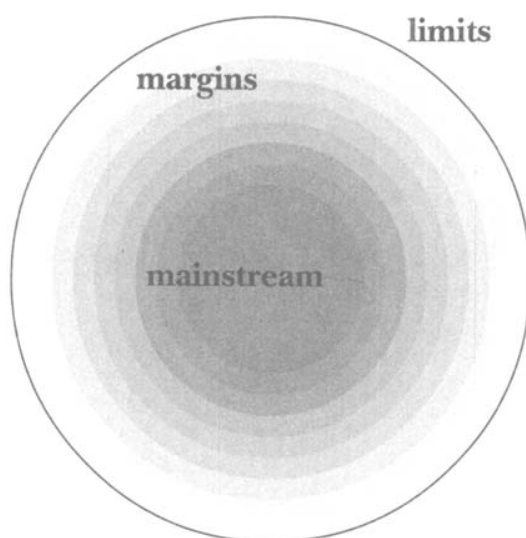


Figure 1. Degrees of Representation Quality.

This distribution does, however, probably correlate with how representative mainstream views actually are—i.e., they show only what is concentrated at the perceived center and how that puts others in the margins. The core does not consist of many different entities. Putting this distribution into social terms creates a small core surrounded by margins. If one takes all so-called "special interest groups" out of the social equation, there is little left in the mainstream. In North American society, taking away women, African Americans, Hispanic Americans, French Canadians, Native peoples, Asian Americans, lesbians and gay men, people with disabilities, anyone who is not Christian, working class and poor people, and so forth, one is left with a very small "core." An image that shows the complexity of these overlapping categories is that of a huge Venn diagram with many sets limited by Boolean ANDs. The white AND male AND straight AND European AND Christian AND middle-class AND able-bodied AND Anglo mainstream becomes a very small minority (Figure 2), and each set implies what it is not. The implication of this image is that not every person, not every discourse, not every concept, has equal weight. Some discourses simply wield more power than others. Different discourses have different levels of power to construct our realities. The Venn diagram helps to represent the discourses constructing classification. However, Venn diagrams operate on the basis of dualities. Something either is or is not in the circle (fuzzy sets could help somewhat in this respect). Further, as the sets overlap, these estimate only quantity and not the shape or relative location of the dominant.

## MAPPING AS METAPHOR

Zipf-like distributions and Venn diagrams are descriptive representations of a phenomenon. They do not contain the potential to inform change. A more powerful device that does have this potential is metaphor. Michael A. Arbib and Mary B. Hesse (1986) suggest that:

> Metaphor is potentially revolutionary. . . . Scientific revolutions are, in fact, metaphoric revolutions, and theoretical explanation should be seen as metaphoric redescription of the domain of phenomena . . . . Metaphor causes us to "see" the phenomena differently and causes the meanings of terms that are relatively observational and literal in the original system to shift toward the metaphoric meaning. . . . Meaning is constituted by a network, and metaphor forces us to look at the intersections and interaction of different parts of the network. (p. 156)

The diagrams in Figures 1 and 2 are spatial representations but not spatial metaphors. To redescribe classification through theoretical explanation, to explore its network of interactions and intersections, requires a more complex device.
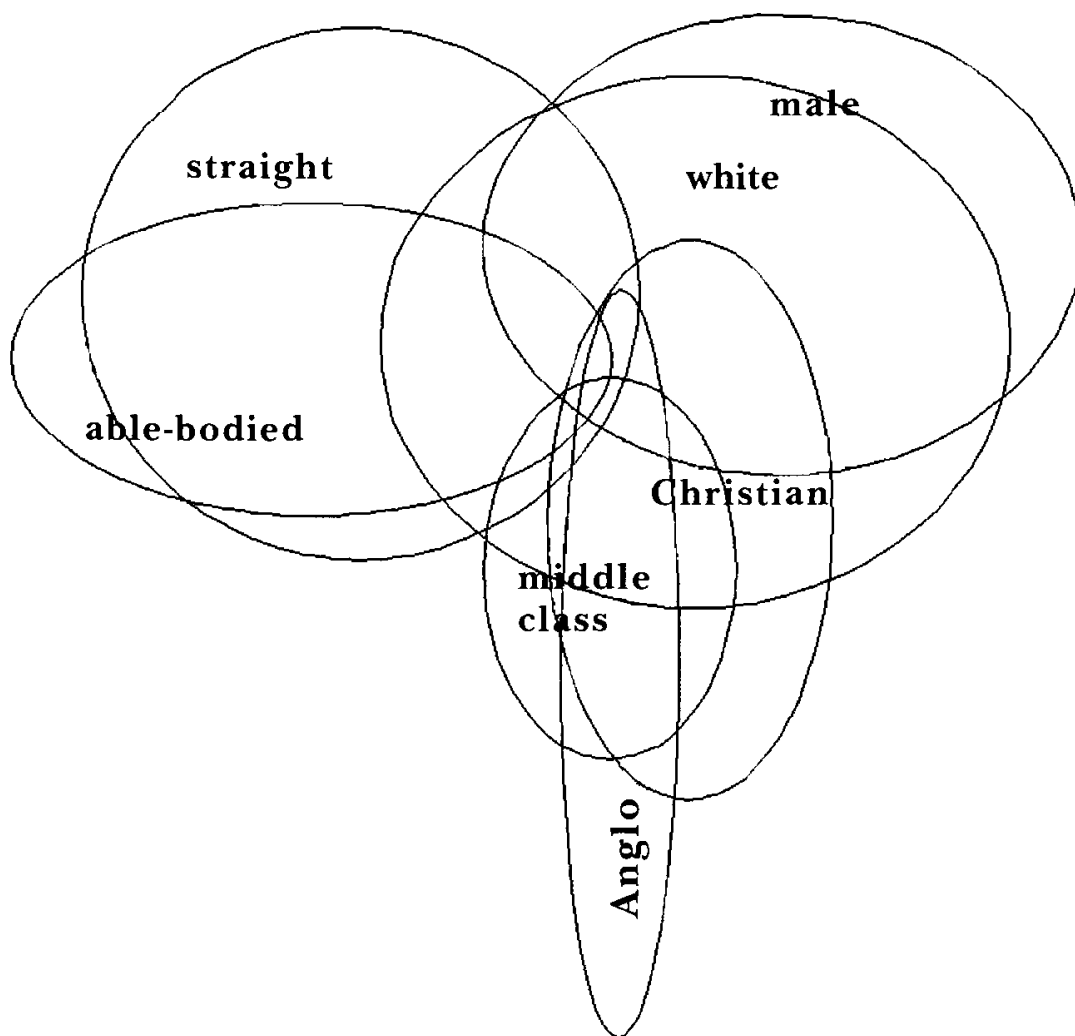
Figure 2. Representation of Classification Complexity in Overlapping Categories.

To see classification differently, spatial metaphors were chosen beginning with maps. Whether maps of the earth's surface or maps of knowledge, which we call classifications, these are socially constructed representations. Werner Bies (1996) notes that cartographical and architectural images are particularly prolific as metaphors for classification (p. 4). He suggests that the way we organize knowledge is "an essential part of the cultural memory" just as is the knowledge itself (p. 7). Therefore, analyzing the metaphor as well as the system will reveal the construction with greater clarity. Use of a metaphor is itself part of the social construction. To take this a step further, it is suggested that understanding this cultural metaphor can help us understand the construction of classification.

Mapping is not a new metaphor for classification. To look at the metaphor of mapping and the way it is used in knowledge organization, the discussion will now turn to two of the fathers of knowledge or information organization, Berwick Sayers and B. C. Brookes. In his classic work, *Manual of Classification*, Berwick Sayers (1926) states categorically that: "A classification scheme is really a map of knowledge. . . . A general classifica-

tion is, then, a map of the universe within and without the mind of man; it covers all things we may have known, know or can know. In the language of metaphysics it covers all *being*" (pp. 65-66). Sayers is using the metaphor of the map to suggest the vastness that classification can cover. He is making a presumption that a boundless system is actually possible and that a universal classification can exist. This presumption is at odds with Drucilla Cornell's idea, described earlier—i.e., that systems are defined by their limits. The contrast between Sayers and Cornell is that of empiricist versus poststructuralist. Sayers implies that there is a single knowable reality that classification can represent in its entirety. Cornell suggests that there are multiple realities such that no system can represent reality in its totality.

In the fourth edition of his work, Sayers (1967) goes further to say that:

> [A classification's] task is to provide for the field of knowledge or part of it, as comprehensive and clear a statement as the cartographer is able to make of a territory of the earth. For just as a map makes clear the relationship between place and place so a classification strives to show the relationship of each branch of knowledge to the other branches. (p. 32)

That is, the map as a metaphor works because it is comprehensive (including everything), clear, and shows relationships. In this sense, the map works from a poststructural view as well since the map is just as constructed as the classification.

B.C. Brookes's (1980) perception, expressed in one of his articles on the foundations of information science, adds the characteristic of objectivity. Brookes suggests that a map is an objective representation of a landscape, independent of the perspective one would have in the view from a window. One "objective map accommodates all possible subjective views of the same scene" (p. 270).

Together, then, Sayers and Brookes suggest that classifications can be all-encompassing, accurate, and objective relational representations of knowledge or information—just as maps are. However, there is no reason to think that maps have any of these characteristics. Maps are no more objective or free of perspective than classifications, in spite of their basis in accurate measurement as indicated by Brookes. Maps are just as culturally bound as classifications and classificationists' reliance on cartographic imagery as being neutral and has allowed the continued existence of the illusion that classification can also be neutral. Examining the limitations of maps can help to define what questions we should ask ourselves about classification.

Maps have always determined the limits of our worlds. In 500 B.C., Hecatæus created a map of the earth as a disk representing the world known to him, with the Mediterranean (from the Latin; middle + land or

earth) at the center. It is like the Zipf-like diagram in Figure 1. What is at the center is what he knew best. In addition, Hecatæus's map defines the outer limits of the earth's disk as being the ocean beyond Europe, Ethiopia, and India. Present classification schemes are somewhat like maps of the earth as a disk—i.e., limited to a cultural perspective.

A major characteristic of classification is that it is meant to place related concepts in proximity to each other. This factor suggests that classification is a spatial ordering. Certainly, thinking of its use for shelving books in a library, one can recognize its existence in what amounts to one-dimensional linear space. A book on a shelf can be to the left of one book and to the right of another but cannot sit next to a third. Maps also determine the perceived dimensions of spaces. Like the two-dimensional projections of the three-dimensional earth classifications, these must distort all knowledge in its infinite multidimensionality into a linear arrangement suitable for creating a browsable list or locations on shelves. For example, traditional map projections, like the Mercator projection, skewed the size of different parts of the world relative to each other. Therefore, the European and North American colonial powers in the temperate latitudes appear much larger than countries of the South that are closer to the equator (for further explanation and an interesting alternative, see *Map of the World*, n. d.), in the same way that traditional classifications have allocated more space to mainstream topics and less to marginal topics.

Maps of the same area may be differently constructed depending on cultural discourses. Maps by Native North Americans assisting European explorers included rivers, mountains, and other physical features relative to each other and to the settlements of different tribes (see, for example, three maps on plate 59 in the *Historical Atlas of Canada*, 1987). These maps did not divide up the entire space into discrete units like euro-settler maps. The latter tradition, which we still follow, divides the "pie" into separate pieces that take up the whole space. There is no common space left. Each piece of the terrain "belongs" to someone, reflecting a particular cultural concept of property. Every inch is part of a jurisdiction. In looking at classification as a sort of mapping, we see how similar discrete domains with boundaries are created. Each concept is limited by its definition, and the definition is the boundary of what is or is not a given concept. The definition marks the territory. Since the different territories or categories in this type of map are ideally mutually exclusive, definitions that criss-cross each other cause problems that need to be dealt with by breaking them into facets and creating hierarchical arrangements— i.e., cities within states, states within countries, and countries within continents. However, going back to the contrast between Native American maps and conventional political maps, it is apparent that even this approach of mapping by dividing up territories is not a universal concept— it is culturally bound.

## CONSTRUCTING PARADOXICAL SPACES

This idea of the social construction or mapping of information is very interesting in and of itself, but of what use is it? We know that classifications are not perfect, and that they reflect social biases. Can spatial metaphors of mapping help address these biases? Can these be theoretically revolutionary as Arbib and Hesse (1986) suggest above?

To test the power of the metaphor, an explanation of the development of a theoretical reason drawn from spatial constructions of a range of poststructural and feminist theorists will be given. The specific project that has been a vehicle for evolving these ideas is an effort to map the terminology of a marginalized knowledge domain to a mainstream classification, the *Dewey Decimal Classification*. The project takes the terms of a widely used feminist vocabulary, *A Women's Thesaurus* (Capek, 1987), and links these to numbers in *DDC*. This approach is a way of linking the margins and the center to create a sort of network or web instead of concentric circles with no overlaps. According to Arbib and Hesse (1986), the network creates the meaning. This project constructs a network of intersections different from those in the original *DDC* so that it creates meaning differently. To enable this network of links, Dennis Ward, a colleague in the School of Library and Information Studies, University of Alberta, is developing Windows and World Wide Web interfaces to reflect the theoretical framework.

*DDC* is a good representation of mainstream thought. It has not been left to the peculiarities of its nineteenth century origins. For example, it is a long time since it located the status of women in 396 between etiquette and outcast races as it did in earlier editions. However, it does still show the basic structure it inherited from Melvil Dewey's milieu. It is not limited by literary warrant, but revisions are often based on how literature is used in the disciplines represented in *DDC* such as recent revisions in public administration and the life sciences. Therefore, *DDC* continues to represent mainstream arrangements effectively and is constructed by various mainstream voices and not just one dominant discourse.

In comparison, the concepts represented in *A Women's Thesaurus* and the relationships between those concepts cross different disciplines, setting up an alternative structure that is fundamentally different. It is a structure developed in the margins—i.e., in the marginalized knowledge domain of women's studies and feminist thought.

By linking these two modes of representation, some might consider this as trying to fit round pegs into square holes or comparing apples and oranges or some other similar metaphor. However, continuing with these spatial metaphors, it is suggested that what is actually being done is constructing paradoxical spaces. Paradoxical space is a concept developed by feminist geographer Gillian Rose (1993). It is simply a practice that allows

existence on both sides of a limit simultaneously or alternately. It is both inside and outside, center and margins. In this way, it does not put a new structure in place of the old but puts a different spin on existing concepts that come to coexist with concepts from the margins (p. 140).

An everyday example of paradoxical space is the concept of separate spheres, public and private, associated with men's roles and women's roles. The private sphere represented by the white bourgeois concept of "home" and the public sphere represented by the paid workplace have been sites of paradoxical space in a variety of ways (Rose, 1993, pp. 52-56; Haraway, 1991, p. 170). Female-intensive professions like nursing, home economics, teaching and, of course, librarianship brought the ethic of care from the private women's sphere to the public male sphere in the nineteenth century. Later in this century, the necessary revisions of white middle-class feminism came to recognize that the private sphere, the home, is a workplace not only for the women who live there, but also for the women who leave their own homes to work in the homes of others. These women are mostly women of color who bring a very different perspective to the idea of the private sphere as a place for women's work. Recognition of the widespread existence of wife abuse also upsets the idea of the private sphere as the place where women are in control. Technology is now reviving the old cottage model of exploitation in the home. The electronic cottage and telecommuting bring the public sphere and its values into the private sphere (see, for example, Fulton, 1997). These examples of the fuzzy boundaries between public and private make both into paradoxical space. It is no longer possible to define the limits between public and private. "Home" is not a simple concept— it never was except in our naïve constructions of it. However, we can still understand concepts like "home" because paradoxical spaces can exist.

## QUALITY OF CONSTRUCTED SPACE

We can also purposely create paradoxical spaces. In this project, I have worked with research assistants to link the concepts from *A Women's Thesaurus* to *DDC*, creating paradoxical space. As we began, the idea worked reasonably well and seemed to have potential but, as we progressed, it became apparent that some concepts mapped to positions qualitatively better than others. In seeking some way to analyze the qualities of the links, what was first considered was their coextensiveness. Coextensiveness is considered here in spatial terms: the "shape" of the topic and the "shape" of the representation are the same, or, as Jessica Milstead (1984) puts it, coextensiveness is "the extent to which the index term reflects the precise content of the item of information . . . " (p. 143). Milstead suggests the limitations of coextensiveness for classification when she opposes the predetermined pigeonholes of classification to the potential coextensiveness of thesauri. Most classification constructs pigeonholes, which are pre-

formed without reference to the subjects of particular documents. Therefore, documents are put into the pigeonhole "closest in size to the subject" (p. 144). Coextensiveness is based on the subjects of individual documents while pigeonholing is based on the structure of the system.

Coextensiveness became a useful measure for this project in a sort of Goldilocks-and-the-three-bears way. Some matches between feminist topics and *DDC* numbers were too broad, others were too narrow, and others were just right. Of course the analogy did not hold up because some were overlapping in an associative, rather than a hierarchical, manner and other concepts simply had no number to represent them at all. The coextensiveness problems were especially acute in the treatment of topics from the gendered perspective implied by a feminist thesaurus that required our assessment of coextensiveness to be split into general and gendered forms (the basic approach of the research and the variables are discussed by Olson & Ward, 1997a, 1997b).

However, even more problematic, and far more theoretically interesting, were problems of gathering and proximity. Classification gathers works on a particular topic or group of topics and places them in close proximity to related topics. What became interesting as we progressed with mapping *A Women's Thesaurus* to *DDC* was that the gathering and proximity sometimes created odd, and even unfriendly, environments. To address this idea, feminist philosopher Lorraine Code's (1995) concept of rhetorical space was used:

> Rhetorical spaces . . . are fictive but not fanciful or fixed locations, whose (tacit, rarely spoken) territorial imperatives structure and limit the kinds of utterances that can be voiced within them with a reasonable expectation of uptake and "choral support": an expectation of being heard, understood, taken seriously. They are the sites where the very possibility of an utterance counting as "true-or-false" or of a discussion yielding insight is made manifest. Some simple examples will indicate what I mean the term to achieve. . . . Imagine trying to make a true statement about whether it is more convenient to fly into Newark or La Guardia airport in the year 1600. The statement would not be false but meaningless: it could neither be true nor false within the available discursive possibilities. Or imagine trying to have a productive public debate about abortion in the Vatican in 1995, where there is no available rhetorical space, not because the actual speech acts involved would be overtly prohibited, but because the available rhetorical space is not one where ideas on such a topic can be heard and debated openly, responsively. . . . what I want this terminology [rhetorical space] to do [is], namely to deflect the focus of philosophical analysis away from single and presumably self-contained propositional utterances pronounced by no one in particular and as though into a neutral space; and to move it into textured locations where it matters who is speaking and where and why, and where such mattering bears directly upon the possibility of knowledge claims, moral pronouncements, descriptions of "reality" achieving

> acknowledgment, going through. Often in such spaces discourse becomes a *poiesis*, a way of representing experience, reality, that remakes and alters it in the process. And the making is ordinarily a communal process, dependent for its continuance on receptive conditions, on engaged responses both favourable and critical. (p. x)

Code proposes a new concept in spatial imagery that helps explain what goes wrong for marginalized topics in classification. Even more than coextensiveness, rhetorical space helps explain why the mapping of classification supports mainstream biases. To demonstrate, key phrases will be taken from Code's defining quotation and will be elaborated on in relation to classification and in light of other feminist and poststructuralist theorists' work.

1. "Rhetorical spaces . . . are fictive but not fanciful or fixed. . . . " That is, they are constructed, made-up (fictive), but not arbitrary (not fanciful) and dynamic (not fixed). This is also true of classifications. Classifications are not innate or natural but are constructed. Their construction has some logical basis, and they change as discourses continue to act upon them.
2. "[T]erritorial imperatives structure and limit . . .". The spaces have boundaries. They are limited by the way they are constructed and by the imperatives of the discourses that construct them. Again they are like classifications which are limited systems, including some concepts and excluding others. As Cornell suggests, limits define systems and spaces.
3. "[B]eing heard, understood, taken seriously . . .". What is limited when positive rhetorical space is lacking is voice. Voice is a given for mainstream discourses, but for marginalized discourses it is something more vital. As bell hooks (1989) puts it:

> Moving from silence into speech is for the oppressed, the colonized, the exploited, and those who stand and struggle side by side. . . a gesture of defiance that heals, that makes new life and new growth possible. It is that act of speech, of "talking back," that is no mere gesture of empty words, that is the expression of our movement from object to subject "the liberated voice." (p. 9)

So a positive rhetorical space allows marginalized discourses to be heard as legitimate statements—i.e., to be acknowledged as worth listening to. Cornell (1992) proposes a responsibility for those who control a system to make its limits permeable so that they can approach an ethical relationship with those who are excluded (p. 62). The permeability of the limits allows the voices of the excluded—the oppressed, the colonized, the exploited—to be heard in the system. Those of us with authority must constantly throw the system off balance to maintain this permeability (p. 80).

4. Code intends the idea of rhetorical space "to deflect the focus of philosophical analysis from single and presumably self-contained utterances pronounced by no one in particular as though into a neutral space . . . " (p. 10). This apparently neutral space is like postmodern theorist Henri Lefebvre's (1991) "transparent space" which denies the existence of anything excluded from its mapping because it appears to be all there is. "Transparent space" is the illusion that location is neutral—i.e., that mapping territory can be a *true* representation of some essence of reality as B.C. Brookes (1980) suggests. However, there is an implied exclusion defining the transparent space that is hidden by it. Because space has boundaries and always includes and excludes something, it cannot be neutral. Making the exclusions visible means identifying the space's boundaries to allow recognition of what is outside those boundaries. It is identifying the implied opposite of a deconstructive binary opposition. It shows the constructed nature of the space. It moves the discourse "into textured locations where it matters who is speaking and where and why, and where such mattering bears directly upon the possibility of knowledge claims" (p. x). Transparent space is difficult to discern because of its apparent neutrality. The efforts at neutrality that are made in classification can mask exclusions.

5. "*[P]oiesis*, a way of representing experience, reality, that remakes and alters it in the process." *Poiesis* is a creative and creating production. In *poiesis*, we understand that the representation of reality is the construction of reality. The representation of information, through classification, is part of the construction of information. Classification remakes and alters information by constructing a particular context for it—gathering, scattering, and juxtaposing topics in relation to each other. How broadly or narrowly topics are represented will enhance or mask their visibility. In these ways, classification produces information in a creative process. This process of *poiesis* is a locational one. Feminist sociologist Elspeth Probyn (1990) proposes that:

> Through location knowledges are ordered into sequences which are congruent with previously established categories of knowledge. Location, then, delineates what we may hold as knowable and, following Foucault, renders certain experiences "true" and "scientific" while excluding others. (p. 178)

She continues on to point out that this act of creation or construction determines not only what is knowable, but whose voices are heard. So the creation of classification creates the space in which some knowledges are central and others are peripheral.

6. This creation of reality is "a communal process, dependent for its continuance on receptive conditions, on engaged responses both

favourable and critical." That is, both the context and the process affect the construction of reality. It could be called reflexive or holistic. It is akin to the death of the author and the ascendancy of the reader in literary criticism. The author does not create the text. It is created in the process of reading and depends upon the "receptive" and "engaged" reader for its meaning and existence. It involves interpretation, in the case of classification, by classifiers and users. In this sense it places responsibility for the construction of information not just on classificationists who write classifications but also on the individuals and institutions who use classifications.

## OPERATIONALIZING THE THEORY

To operationalize the concept of rhetorical space, our research project examines the *DDC* context of individual concepts from *A Women's Thesaurus* by looking at:

1. What other topics share the number?
2. How is the number described?
3. What is the hierarchical context?
4. What topics sit on either side?

Two examples from our pilot study illustrate how the variable of rhetorical space works to reveal whether or not feminist topics can be taken seriously in *DDC*.

The first topic is colonialism. The following entry from *A Women's Thesaurus* implies the scope of this term:

Entry from *A Women's Thesaurus*:
**colonialism**

UF      imperialism
NT      neocolonialism
RT      apartheid
cultural imperialism
decolonization
developing nations

. . .

Colonialism appears in the index to *DDC* and points unequivocally to the number 325.3. This concept is not excluded from *DDC*. However, its rhetorical space is not as neutral as it at first appears. The following entry from *DDC* shows how 325.3 is defined and what it includes:

Entry from *DDC*:[2]

**325.3    Colonization**
Class here exercise of **political dominion over distant territories**

DDC Index Terms:
**Colonialism**
Colonization

The location of *colonialism* with *colonization* is an example of transparent space. It seems neutral but is actually one-sided, showing *colonization* from the point of view of the colonizing power as opposed to the people and culture being colonized. *Colonialism* is linked to this number not in its caption but only as a reference from the *DDC* relative index. The entry describes the colonized territories as "distant" from the colonizing powers, not the other way around. Colonies are not distant in the view of colonized people.

The following summary shows the hierarchical and sequential contexts of 325.3 that reinforce the perspective of the imperial power observing the colony:

Summary from *DDC*:

300 Social sciences
320 Political science (Politics and government)
325 International migration and colonization

| 325.1 | Immigration |
|---|---|
| 325.2 | Emigration |
| **325.3** | **Colonization** |
| **325.4-325.9** | International **migration to and colonization in** specific continents, countries, localities in modern world |

In categories 325.4-325.9, the geographic subdivisions that combine "migration" and "colonization" move from colonizing country "to" colony in its subdivisions and define colonization as "in" the colonized locale and not "by" the colonizers. As with the description of 325.3, the geographic subdivision is entirely from the perspective of the imperial power. Colonization involves movement—being colonized does not. The location of colonialism in the established category of colonization fulfills Probyn's (1990) prediction that the voices of hooks' colonized become peripheral.

A further indication of this marginalization is found by looking higher up the classificatory hierarchy. The *DDC* principle of hierarchical force[3] dictates that what is true for 325 is also true for its subdivisions including 325.3:

Entry from *DDC*:

**325** **International migration and colonization**
Including involuntary population transfer, population exchange
**Class movement of people associated with a specific event in history with the event in 909 or 930-990; class interdisciplinary works on international movement of people in 304.82**

While colonialism involves people from the imperial power going to the colonized territory, its disruptive nature often causes other movements of people—most notably the scattering of colonized peoples that form diaspora. For people moving away from the site of colonization as part of the diasporas that often result from colonialism, the instructions under category 325, *International migration and colonization*, suggest two options. First, movement of people associated with a specific event in history is to be classed with the event in the 900s. This option has at least two problems for representing postcolonial diasporas: first, it is difficult to pin down colonization as a specific event because it tended to happen over a diffuse period of time not conducive to classification and, second, by putting these movements into history, we would take them out of the present day where their results, typically including racism, must be addressed.

The second option is to use the number for interdisciplinary works on international movement of people in 304.82:

Entry from *DDC*:

**304.82        International movement**
**Class international emigration in 304.809; class**
**international immigration in 304.83-304.89**

The number 304.82 is a subdivision of movement of people under the broader concept of social behaviors, thus taking this issue out of the political realm of colonialism. It does allow for geographic subdivision in either direction—the country to which people went or the country which they left. The latter applies to the postcolonial diaspora, but it uses the less preferred number. Preference will be given, according to *DDC*'s rule of zero,[4] to international immigration rather than emigration. Therefore, people leaving India for other places in general will be classified with movement from India, but people leaving India for specific destinations will be classified with movement toward each of those places (such as movement toward England) thus diasporizing the diaspora.

These details about the siting of *colonialism* in *DDC* help to reveal that the apparently neutral transparent space is actually skewed toward a mainstream interpretation because it has been constructed by a mainstream discourse.

A second example is the poor representation in mainstream schemes of the concept of unpaid labor. The heading in *A Women's Thesaurus* is:

Entry from *A Women's Thesaurus*:

**unpaid employment**
UF   nonwage labor
BT   employment
NT   unpaid household labor
RT   economic value of women's work

homemaking
unpaid labor force
valuing children
volunteer work

The term *unpaid employment* in *A Women's Thesaurus* is a subdivision of *employment*. However, when we try to classify it in the same way in *DDC*, we find that the relative index sends us to 331.125, *Labor actively employed*:

Entry from *DDC*:

**331.125**      **Labor actively employed**
That portion of the total available supply of labor
employed at any given time
Including types of **employment**
**Class here utilization of human resources, employment,
comprehensive works on employment and compensation**
DDC Index Terms:
**Employment**
Human resources—utilization—economics
Occupations—active employment

The "class here" note indicates that the number includes "comprehensive works on employment and compensation" implying only paid labor. This implication is confirmed by hierarchical force since 331.125 is a subdivision of 331.12:

Entry from *DDC*:

**331.12**      Labor market
The activities of and opportunities for **buying and selling
labor**

The phrase "buying and selling" confirms that only paid labor is included. The same is true if we look at the labor force:

Entry from *DDC*:

**331.11**      **Labor force**
**All who are employed or available for employment**
Class here human resources, manpower and womanpower,
labor supply, size of labor force

The scope note indicates that this definition of *labor force* includes "all who are employed or available for employment" which is not likely meant to include people who are available for becoming housewives and househusbands. If the latter are part of the labor force under this definition, it is more likely as people available for paid employment.

Some conventional types of unpaid employment are represented in other places in the classification with the result that they are not treated

as labor. *Homemaking*, one of the related terms to *unpaid employment* in *A Women's Thesaurus*, is located in home economics, which is a subdivision of technology:

Entry from *DDC*:

**640    Home economics and family living**
Class here **management of home** and personal life, domestic arts and sciences
DDC Index Terms:
   Domestic arts
   Domestic sciences
   Home economics
   **Homemaking**
   Homes
   Homes—home economics
   Household management

Summary from *DDC*:

| | |
|---|---|
| 600 | Technology (Applied sciences) |
| 640 | Home economics and family living |
| 640.4 | **Specific aspects** of household management |
| 640.41 | Helpful hints and miscellaneous recipes |
| 640.42 | Management of money |
| 640.43 | Management of time |
| 640.46 | **Household employees** |
| 640.49 | Survival housekeeping |

While this is an excellent place to put information about the processes and production of homemaking, acknowledging it as appropriate to be adjacent to agriculture or engineering, it does not include the aspect of the people who do this labor except in a subdivision for household employees, the people who are paid to do housework.

Another example of unpaid labor is voluntarism, which is defined as one aspect of social participation along with encounter groups and sensitivity training:

Entry from *DDC*:

**302.14    Social participation**
Including communalism, competition, cooperation, encounter groups, sensitivity training, **voluntarism**

While anyone who has done volunteer work may appreciate its links to encounters and sensitivity, this location treats voluntarism as "social participation" and not as labor. While it is important not to belittle the value of social participation in a world in which governments are cutting back

essential social services which then fall to voluntary agencies, the labor of voluntarism also becomes a key to economic well-being.

A way of addressing this problem is to create a paradoxical space by locating the general concept of unpaid employment alongside paid employment. While these are two different topics, they may sit adjacent to each other to create viable rhetorical space and give legitimate voice to the unpaid labor performed everyday around the world. One option would be to tuck it into other generalizations of the labor force, say in the gap between "qualifications and personal characteristics" and "systems of labor":

Summary from *DDC* with potential addition:

| | |
|---|---|
| 300 | Social sciences |
| 330 | Economics |
| 331 | Labor economics |
| 331.1 | Labor force and market |
| 331.11 | Labor force |
| 331.110* | < Zero Subdivisions > |
| 331[.111] | Geographic distribution |
| 331.114 | Qualifications and personal characteristics |
| ⇨ | **Economic basis of labor** |
| ⇨ | **Unpaid labor** |
| ⇨ | **Paid labor** |
| 331.117 | Systems of labor |
| 331.1172 | Free labor |
| 331.1173 | Compulsory labor |
| 331.118 | Labor productivity |
| 331.119 | Labor force by industry and occupation |

Here a section with a title something like "economic basis of labor" with the subdivisions "unpaid labor" and "paid labor" (with the mainstream interpretation coming second to upset the hierarchy a bit) could set this topic alongside basic concepts of the labor force. Because this number would be hierarchically encompassed by "labor force," the definition of the latter would have to be adjusted to include unpaid labor as would 331.1, *Labor economics,* in a reversal of hierarchical force—the subdivision driving the definition of the dominant concept. Mapping a marginal concept in the midst of a mainstream concept will not alone create positive rhetorical space. However, careful placement of such interpolations will make transparent space visible and will create paradoxical spaces where discussion of issues can continue openly.

## CONCLUSION

Following Drucilla Cornell's concept of systems' limits, there would be no point in abandoning our existing classifications in the hope of achieving that objective map described by B.C. Brookes. All systems will exclude

and marginalize in some way. However, it is possible to shift between mainstream and margin in our mapping, creating paradoxical spaces and defining the limits differently. With a new theoretical framework, it is possible to make changes in our mapping akin to the changes made when Pythagoras determined that the earth is round and not flat.

The new theoretical framework developed throughout this article is offered as a new way of mapping knowledge in classification. It has potential for both analysis and amelioration. The categories of classification—because they typically reflect a cultural mainstream—appear neutral, objective, and transparent. This makes marginalizations and exclusions difficult to identify. Therefore, to analyze the problems of classification in relation to marginalized knowledge domains, the framework poses three assumptions drawn from feminist and poststructural literature examined in this discussion. First, classification, like any map, is constructed by dominant cultural discourses. Second, classification, like any system, has constructed boundaries or limits that result in exclusions. Third, the construction of classification is a form of location that defines and sequences what is accepted as knowledge, thus marginalizing as well as excluding. Regarding classification as a text and reading it with these three assumptions in mind will make what was transparent and invisible opaque and visible, elucidating the biases and the discourses that construct and enforce them.

To ameliorate the biases of classification, this framework proposes that the limits of a classification be made unstable and permeable to allow the voices of those who have been excluded to be heard. In this way, the classification approaches an ethical relationship with previously silenced voices. Further, to address the marginalizations within classification, this theoretical stance advocates the creation of paradoxical spaces that are neither mainstream nor marginal but are both simultaneously or alternately. By mapping *A Women's Thesaurus* to *DDC*, this project creates such spaces. The same concept can offer other ways of deconstructing and reconstructing not only the limits but also the structures of classification.

The creation of paradoxical spaces can become a *poiesis*—i.e., that alters representation in ways that make boundaries permeable. In the next stage of this project, suggestions will be made for revision, supplements will be devised, and optional practices offered to further develop paradoxical spaces for women's studies and feminist thought in *DDC*. It will allow for more dimensions and, thus, more creative connections between places/spaces/concepts than have hitherto been available. Further, we hope that it will be a prototype for a *poiesis* applicable to other marginalized knowledge domains. With care, paradoxical spaces will appear throughout classifications, thereby keeping them from stagnating and keeping them vital and exciting.

## NOTES

[1]See, for example, Afolabi (1992) on Africana; Hamdy (1980) on Arabic materials; Iwuji (1989) on Africa; Lochhead (1985) on women; McConnell (1984, 1985a, 1985b) on Melanesia; Milstead Harris & Clack (1979) on nearly all of these groups; Mowery (1989) on Mexican Americans; Pacey (1989) on Africa; Steinberg (1974) on women; and Wolf (1972) on gays and lesbians.

[2]Entries and summaries from *DDC* are from the electronic version, *Dewey for Windows*. They have been edited in format. The relative index terms are included only when they are relevant to the discussion and related *Library of Congress Subject Headings* have been omitted. Other omissions are shown by ellipses. Emphasis is mine to facilitate interpretation.

[3]"Hierarchical force (DDC Glossary). The principle that the attributes of a class as defined in the heading and in certain basic notes apply to all the subdivisions of the class, and to all other classes to which reference is made" (*Dewey for Windows*).

[4]"Rule of zero (DDC Glossary). The rule instructing that subdivisions beginning with zero should be avoided if there is a choice between 0 and subdivisions beginning with 1 - 9 in the same position in the notation. Similarly, subdivisions beginning with 00 should be avoided when there is a choice between 00 and 0" (*Dewey for Windows, 1996*).

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