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Categorization: Connections between Language and Society

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Introduction.

Linguistics is primarily concerned with explaining the patterns and structures of human language. Central to this pursuit is an understanding that human language is a unique phenomenon and must somehow be coded in the brain. Before this mentalistic age, Emil Durkheim and Marcel Mauss (1963) presented a discussion of cultural classification systems in a number of non-western cultures in *Primitive Classification*. Classification is a symbolic system that allows people to sort their experiences with the world into groups which are distinct from each other. In some ways it is necessary to allow humans to remember relevant information about the vast communal knowledge of the world. Classes help humans manipulate the relationships between things and draw conclusions about their interaction with the world. The classification systems discussed by Durkheim and Mauss displayed some of the same remarkable qualities as the system of language. Significantly, they are arbitrary, abstract and immense. They catalogue the infinite realm of human experience in opaque, culturally specific ways.

Durkheim and Mauss (1963) concluded that social structure of human groups was the first model for more extensive classification systems. They presented a view that

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such classification is not innate in the mind nor is it a reflection of somehow *natural* categories. Rather, classification is a social institution. Durkheim and Mauss have come under criticism as simplistic and logically flawed (Dennes 1924, Lukes 1985, Gehlke 1915). Additionally, the causal argument from social structure to cultural classification is difficult to establish. However, the argument Durkheim and Mauss (1963) made for social structure as the original model for classification is one possible origin for symbolic organizations. This model may also account for linguistic structures when taken to another level of abstraction. Linguistic classification systems such as those of Dyirbal (Lakoff 1987, Dixon 1972), Jacaltec (Craig 1986) and American Sign Language (Aronoff 2003, Liddell 2000, Suppalla 1986) may be best understood as linguistically overt cases of the cultural classification discussed by Durkheim and Mauss. This article explores the relationship between cultural and linguistic classification and supports a social/historical explanation for both systems.

The Language Organ.

The field of linguistics, since Noam Chomsky's revolutionary work in the 1960's, has focused on explaining and identifying the unique features of human language, which are believed to consist of some *a priori* knowledge of the system of language. Chomsky argued for this based on two primary distinctions between human language and other learned human behaviors. These two extraordinary features of human language were: (i) language acquisition and (ii) linguistic creativity. On the first Chomsky said, "knowledge [of language] arises on the basis of very scattered and inadequate data and that there are uniformities in what is learned that are in no way uniquely determined by the data itself"

(Chomsky 1966:65)[1]. On the second he said, "an essential property of language is that it provides the means for expressing indefinitely many thoughts and for reacting appropriately in an indefinite range of new situations" (Chomsky 1965:6). Essentially, human language is acquired regardless of varied and flawed input, and it endlessly adapts to new situations. These two properties of human language are most salient to Chomsky. He suggests that in order to display these puzzling abilities, humans possess a language organ "as real as the liver," (Chomsky 2000:110). He claims that these unique abilities can only be attributed to a biologically unique structure.

Recent work has suggested that many aspects of human language are not unique to humans. Sensory-motor ability in primates, dolphins and some birds displays similar phonetic ability to that of humans. Animals have also shown that they can acquire abstract concepts such as color, number and sense of self (Hauser, Chomsky and Fitch 2002). But parallels to Chomsky's two characteristic abilities – language acquisition and linguistic creativity – are not clear in the animal kingdom[2]. However, there may be a human non-linguistic parallel which sheds light on possible origins of these unique abilities. Human cultural classification displays these same traits of finding pattern and order out of inconsistent data and adapting to new situations by expanding the system seemingly infinitely.

Primitive Classification.

[1] Actually, L1 acquisition research has shown that the input provided by adults to children is not flawed and garbled as Chomsky (1966) suggested. Child-addressed language has been shown to be strategically structured, grammatical and semantically restricted on topic (e.g. Snow 1972, 1977).

[2] Birds have been shown to display some similar patterns to human language acquisition in their learning of species and geographically specific songs. Specifically, they have a critical period to learn the song or it will never develop to its full complexity and the ability to create new songs from partial phrases or segments of songs (see Marler 1991, 1997).

Durkheim and Mauss surveyed a number of non-Western classification systems. While the existence of a system of classification is quite common, different cultures classify their world in many different ways. Cultural classification systems are arbitrary, abstract and immense. They seem to catalogue an infinite realm of human experience in opaque, culturally specific ways. Durkheim and Mauss sought to find a model for such classifications that underlies the cultural variability. They concluded that social structure of human groups was the first class and the model for all other classification systems (Durkheim and Mauss 1963:83). The classification systems of Native Australia, Native America and China analyzed by Durkheim and Mauss were found to be associated with the social structure of each group.

Durkheim and Mauss (1963) begin with a discussion of the common categorization pattern found in Australian Aboriginal tribes. Many tribes show a similar pattern in which the moieties of the society also apply to objects in the natural world. For example, the Port Mackay tribe in Australia gives the labels of Youngaroo and Wutaroo to their two moieties and correspondingly to the two classes of nature in their world view (Allen 2000). Animals, plants and celestial objects all belong to one or the other moiety.

The American Indian Zuñi organize their world into seven groups corresponding to the four cardinal points, up, down and center. The Zuñi classify seasons, weather, animals, colors and social phenomenon, such as war, hunting, agriculture and medicine into the seven classes. The Zuñi's nineteen social clans are divided into six groups of three for each class with the center class containing just one clan (Allen 2000). Durkheim and Mauss claim that the link between the Zuñi classification system and the

Australian systems is the connection between the division of the world and the social groups.

The Chinese Daoist system classifies their environment into eight compass points which relate to eight powers, eight animals, eight colors, etc. Durkheim and Mauss describe the system as both subtle and highly complex in its layered interactions (1963:73). The Chinese are a non-tribal society, so the correlation between social structure and classification is less obvious. However, there are certain connections between people who belong to the same animal or the same year. For example, there are prohibitions on marriage within groups and members of the same animal group are prohibited from attending each other's funerals (Durkheim and Mauss 1963).

The complex interplay between classification and society in these cultures led Durkheim and Mauss to draw a link between the two. They argue that it is the social system that provided the foundation for other types of classification.

> Might it not be that this tendency to imagine purely logical groupings in a form contrasting so much with their true nature originated in the fact that at first they were conceived in the form of social groups occupying, consequently, definite positions in space? [Durkheim and Mauss 1963:83].

This characterization hints at a causal connection between the moiety, the binary social group, and later classification systems. From dual organization, larger systems like the family group and the clan arose and with this, the human capability for classification

expanded. The classification systems are formed on an analogy with social rules and relationships.

This understanding of the origins of classification has been seen as outdated because it situates the gift of classification clearly in the human experience rather than understanding it as a cognitive process. Allen (2000:39) notes that at the time he first read *Primitive Classification* it was seen as "logically fallacious, methodologically unsound and very possibly devoid of any validity whatever." Some of the criticisms of Durkheim and Mauss arise from mischaracterizations of the intent of their argument. Dennes (1915:38-39) wrote,

> Durkheim proposes a new explanation of the origin of these forms of thinking or categories. They are, he holds, the forms which certain collective representations impose upon individual minds. The individual, in other words, has categories stamped upon his mind by society.

This characterization unfairly simplifies Durkheim and Mauss's claim of the impact of society on categorization. Categories are not *stamped upon the mind by society* but modeled on the categories in society.

Durkheim and Mauss have also come under attack for methodological and logical flaws. Lukes (1985) listed the extents of this criticism: possible inaccuracies in the Zuñi data, lack of an account for exceptional cases, false assumption that one classification system is used in a society, lack of historical, evolutionary understanding of social

development and failure to make the explicit connection between society and categorization.

Bloor (2005) does not see these varied criticisms as fatal to Durkheim and Mauss. He presents an adjusted view of Durkheim and Mauss where social structure and categorization "do not stand to one another precisely as cause to effect. Rather, the similarity of structure between knowledge and society is itself the effect of the social use of nature" (2005:91). This adjusted view may be more faithful to the intent of Durkheim and Mauss. It does not rely on detailed correspondences between a particular society's structure and its categorization. It does, however, draw a connection between the two in a more abstract sense. Bloor's view on Durkheim and Mauss does not completely remove the methodological concern raised by Lukes, but it makes them less problematic because direct correspondence between existing social and categorical structures is not necessary for Bloor. Rather, some abstract connection between the two is sufficient to support Durkheim and Mauss's revised point.

Bloor presents social structure and knowledge structure, i.e. categorization, as deeply related, but not necessarily causally related. He considers a slightly different concept of category, referring to laws abstracted from the world. He also expands the notion of societal structure, his main example being influence from English politics and religion on the knowledge of physics at that time. In this expanded view of society, not only the strict social organization, but other relevant social issues influence categorization. This may be the next step of Durkheim and Mauss's view necessary to account for the Chinese example they discuss, where the connection between social structure and classification is not straight forward.

Classification exists in many levels of the human experience, in language, the physical world and society. Linguistic classifiers, discussed below, are only the most social of the categorization in language. There are also clearly natural categories, such as noun, verb, head and non-head in language. The physical world naturally contains categories, like those of prototypes and color terms, discussed below. Society's categories are those discussed by Durkheim and Mauss. It is difficult to convincingly establish a causal relationship between any one of these forces. Arguments have been made for each of these three domains as the origin of symbolic classification. Chomsky (1965) claimed that it is the language organ that provides humans with an analogous 'syntactic' view of the world. The biological capability for language entails a categorical interaction between the human brain and the world. This view relies on what Deacon (1997) called a "hopeful monster" theory. That is, the ability comes from some sudden evolutionary advantage as a result of an arbitrary mutation. This is unsatisfactory because the hopeful monster is unpredictable and random. As Deacon put it, the language organ theory "serve[s] as a place holder for whatever could not be learned." It does not provide an *explanation*; it ignores the origin of categorical thought and attributes the ability to a black box – this cannot be an ideal theory.

Categories are a necessary and psychologically real aspect of human interaction with the world. Rosch (2002) held that human tendencies for categorization are the result of psychological principles, not arbitrary human experience. This view is seemingly in opposition with Durkheim and Mauss until one considers the notion of categories discussed by the two views. Rosch (2002) considered categories as they apply to perception of the world in a basic structure. She discussed basic level categories and

their prototypical representatives, such as *chair*, and the next level classification of that as *furniture.* These are consistent classifications that are psychologically real. Berlin and Kay's (1969) analysis of basic color terms provides more evidence for such lack of cultural variation in categorization. Durkheim and Mauss were not in opposition to these claims, but they looked at how these basic categories were associated with each other to create categorization systems which catalogued the range the of human experience into finite, limited categories.

Durkheim and Mauss (1963) argued against a notion of natural classes as the origin for categorization, that natural divisions in the world lead to the social relations of men. This is supported by the cultural variation between the world's classification systems. At the very least, these systems are a result of cognitive processes combined with cultural information to create general classifications which are meaningful to the members of a society.

Allen (2000) argued that the social structure analogy has more support than these other options. It does not appeal to an accidental mutation and it relies on known human categorical abilities to precede it.

> It is not unreasonable to argue that incest prohibitions mark the emergence of humans from prehumans. If one also accepts that such rules can be subsumed in the rules of marriage and recruitment that define social structures, then the latter are fundamental to humanity in ways that systematic classifications of the contents of nature are not [Allen 2000:53].

It is clear that social rules were present among modern human ancestors. Simple social rules are also seen in present day primates, such as chimpanzees and gorillas (De Waal 2001). This establishes the existence of primitive social structure and its role in the development of modern humans, but can it be linked causally to classification? Causal relationships which deal with sparse archaeological and historical data are not easily supported. Classification appears to be a universal human tendency, so it is likely that there is one origin for such an ability. Analogy is a strong force in human cognition (Barber and Barber 2006). Durkheim and Mauss argued that the social structure, particularly the moiety, is the first and most primitive form of organization and therefore is a likely candidate to be the analogical model for other human classification systems. This is not to say that Durkheim and Mauss intended the analogue classification system to always mirror a society's existing social structure as transparently as the Australian and Zuñi examples they discussed. It is the tendency and ability for categorization which first developed out of social organization, not the exact categories. When discussing the Chinese example, Durkheim and Mauss do not make specific reference to the community social structure on which their classification is modeled. Examples of classification systems with no overt relationship to social structure do not argue against Durkheim and Mauss. Instead, any overt relationship between categorization and social structure is an indication that social strategies for classification are at play in categorization. In many cases, if there was a direct mirror of the society in categorization, it may be lost or obscured by time. But, a direct connection between a society's structure and its categorization is not what Durkheim and Mauss argued for; they argued for human

capacity for social organization as the first categorization on which future tendencies to categorize are based.

Linguistic Classification.

Classifier systems in language can be seen as overt instances of categorization marked in language (Craig 1986:2). Languages use classification in the same way that cultural classification was described by Durkheim and Mauss. Objects and ideas are symbolically classified on the basis of how humans interact with them – socially, physically and functionally (Craig 1986:5). This characterization of linguistic classification echoes Durkheim and Mauss, particularly in the revised approach presented by Bloor. Historically, it is not a very big stretch to imagine that the social classification systems like those of the Port McKay, Zuñi and Chinese became overtly marked on words, better preserving the information carried in the organization. I don't mean to suggest that the same correlation between social structure and noun class will always be observed. The direct connection may be lost, but evidence of the significance of culture on classification systems is obvious.

There are a variety of linguistic categorization systems. Aikhenvald (2000) presented a typology of categorization, considering data from numerous languages and language families. Aikhenvald (2000) emphasized the difference between noun classes and noun classifiers, where noun classes are highly grammatical and obligatory and noun classifiers are more lexical and optional. (1) shows the manifestation of gender noun class in Portuguese (Aikhenvald 2000:2). (2) shows a noun classifier of the Mayan language, Jacaltec (Craig 1986:264).

(1) o minin-o bonit-o
ART:MASC:SG child-MASC:SG beautiful-MASC.SG
'the beautiful boy'

(2) xul naj Pel b'oj ya? malin
came CL:MALE NON-KIN Peter with CL:RESPECTED HUMAN Mary
'Peter came with Mary'

Dixon (1986) discussed these different types of noun categorization and proposed that noun classes may develop out of noun classifiers. The two systems serve the same function of categorization, although Aikhenvald pointed out that recent descriptions of South American languages employ both systems, which suggests that the two are not exclusive.

The following discussion is a brief survey of three linguistic classification systems which demonstrates the point that classification is culturally motivated. This section briefly discusses one noun class and two noun classifier systems of Dyirbal (Lakoff 1987, Dixon 1972), Jacaltec (Craig 1986) and American Sign Language (Aronoff 2003, Liddell 2000, Suppalla 1986). The classification systems of these languages display obvious connections between socially relevant concepts and categories. Similar patterns of association are observed in these linguistic classification systems as in the cultural classification systems discussed by Durkheim and Mauss. These are instances where category membership is overt in the structure of a language.

Dyirbal.

Dyirbal is an Australian Aboriginal language spoken by a rapidly decreasing population of native Australians. The Dyirbal system of classification is marked by noun classifiers

in their language. There are four classes, discussed by Dixon (1972) and Lakoff (1987). Analysis of the Dyirbal classes revealed a system governing an apparently arbitrary classification. The first group, marked by *bayi* contains primarily men and animals. The second group, marked by *balan* refers to women, birds and dangerous things. The third group, marked by *balam* contains edible plants and European goods. The fourth group, *bala* marks everything not contained in groups 1-3. The classifiers must precede the noun, as shown in (3)-(6) (Dixon 1972).

(3) bayi yara
CL:MALE man

(4) balan guda
CL:FEMALE dog

(5) balam maraɲ
CL:EDIBLE black bean

(6) bala gubur
CL:OTHER native bee

Each group contains many other nouns that do not fit these rough category distinctions but, as Lakoff pointed out, they are related through cognitive processes of chaining and specific knowledge. Centrality is the property that basic members of the class are central. This is seen in Dyirbal: class I is male, class II is female and class III is edible things and is similar to Rosch's concept of prototype. Chaining is one process through which non-central members are linked to central members, joining the class. In Dyirbal, the female class is linked to birds and the sun through Dyirbal myth, where both of these things are seen as female. In turn, the sun is chained to fire and fire to dangerous things (Lakoff 1987). Finally, the relevance of Specific Knowledge must be taken into

account when analyzing categories. Specific Knowledge is the cultural experiential domain which is necessary for interpreting the system. For example, the knowledge of Dyirbal myth is necessary to understand their association between women and birds (Lakoff 1987:90-94).

For the Dyirbal categories, social information is necessary to analyze the categorization of the Dyirbal world. It is not directly related to social structure, but societal knowledge and culturally relevant concepts are coded in the system. Incidentally, the Dyirbal society is divided into four social groups (Dixon 1972). There is no explicit mention of a connection between these two prominent groups of four, but it is interesting that a four-way social distinction is made in this society. The tribe is divided into four groups, black eel *ɖigungara*, meat hawk *guɣguru*, large eel *gurgila* and eagle hawk *garbawuɣu*. There are marriage restrictions between the groups and taboos on relationships between related groups (Dixon 1972).

Jacaltec.

Craig (1986) described the noun classifier system in the Mayan language, Jacaltec. Their classification system, similar to those discussed by Durkheim and Mauss, reflects much about their society. The Jacaltec classification is based on two types of classifiers. The first group of classifiers marks social interaction between members of the society; there are different markers for the different levels of status and relationships within their society. Example (2), above, shows the classifiers for MALE NON-KIN, *naj*, and RESPECTED HUMAN, *yaʔ*. Other classifiers separate the human relationships by divinity, kinship, respect, age and gender. Jacaltec classifiers are free morphemes that precede the

noun that they classify. Craig (1986) pointed out cultural motivations for how the classifiers are used. Specifically, the kinship classifiers are reserved for the immediate family, the respect classifier is reserved for people who have earned respect through actions, not birth and infants are not viewed as full members of the society and have a specific classifier setting them apart from older children. She stated that,

> At the level of the social organization of the community the noun classifier system appears to encode two important characteristics of the Jacaltec community, one being that the nuclear family is the basic social unity of the community, and the other that the social status of a person is a function of his or her personal worth and not of social class status [Craig 1986:272].

The mirror of social structure in Jacaltec linguistic classification is clearly analogous to Durkheim and Mauss's conclusion. The connection between the social structure and the classifier system is obvious and more straight forward than the Dyirbal case.

The second group of Jacaltec classifiers mark physical and functional interaction based on the material of an object, with classes for animal, plant, mineral and natural elements. Not all objects require classifiers, but those objects that are associated with classifiers most often occur with one. Within these physical classes Craig (1986) noted that there are specific classifiers for objects to which the Jacaltec people are more closely related. For example, within the plant category, corn, thread, twine and cloth have the specific classifiers *ixim, tx'al, tx'añ,* and *k'ap*. Craig argued that these special categories

represent a special historical relationship between the Jacaltec people and these specific items. Corn was the primary subsistence crop of the Mayan people and traditionally thread, twine and cloth were the primary materials for women's weaving (Craig 1986). This crucial cultural connection resembles Lakoff's (1987) concept of specific knowledge. The classification system as a whole reflects the history of the Jacaltec people's interaction with their world. This intersection between culture and classification is more along the lines of Bloor's (2005) interpretation of Durkheim and Mauss. The social significance of corn and women's weaving materials are coded in the classification system.

American Sign Language.

The classifiers of American Sign Language (ASL) display similar patterns (Suppalla 1986). However, the expectations for how social structure is connected to the classifier system are somewhat more opaque. ASL signers do not have a traditional social structure on which their categorization is based. ASL is a young language, less than 200 years old (Aronoff et al. 2003). However, there are socially relevant issues coded in the classifiers. Since ASL is a language situated in the modern Western society, it's classification system's emphasis on form and function is possibly reflective of this modern society. That is, instead of the association of social class or moiety, ASL classifiers operate within a framework of functional relevance.

ASL classifiers are separate morphemes which are incorporated into signs. Each classifier is marked by a variation in the hand shape within the overall sign. These morphemes usually combine with verb signs to indicate the class of noun which is an

argument of the verb (Suppalla 1986). ASL classifiers differ from spoken language classifiers because the classifier occurs simultaneously to the main sign (Aronoff et al. 2003). Aronoff et al. (2003) proposed this difference as a possible reason why sign languages have developed the complex phenomenon of classifiers so early in the existence of such languages – it is not necessary to have complex morphology because of the nature of the language medium. Liddell (2003) disagreed with the analysis of ASL classifiers as separate morphemes. He concludes that the unique hand shapes are part of fixed lexical verbs which should not be analyzed further. Although the debate over ASL classifiers is ongoing, let's consider how the proposed ASL classifier system fits into the Durkheim and Mauss theory of categorization.

Suppalla (1986) outlined two major categories of classifiers in ASL: (i) size and shape specifiers and (ii) semantic classifiers. The size and shape specifiers represent some physical aspect of objects. For example, the incorporation of the signer's forearm marks a long object as in the signs for tree and telephone pole, shown in Figure 1 (Suppalla 1986). Semantic classifiers indicate a range of attributes including legged objects, body part classifiers, those that mark the physical integrity of the noun and the relative position of the noun, among many others (Suppalla 1986). There are, in fact, semantic classifiers that classify social relationships between people. Producing the sign with the two hands vertically oriented, one on top of the other indicates that the two people involved are of different status. Horizontal orientation of the hands indicates that the people are of the same social status or competing.

The variety of classes represented in this system is striking. As the second subsystem of Jacaltec classifiers did, it calls up a notion of classifiers that emphasized

human interaction with the world. The size and shape and semantic classifiers discussed above classify the world into meaningful groups that mark interaction. For example, the physical integrity classifiers include hand shaped for *broken* and *wrecked* (Suppalla 1986). This is clearly a functional distinction that conveys relevant information to the recipient. Additionally, objects can come into and out of this class depending on the situation. This feature is a trait of linguistic creativity – the infinite adaptability of linguistic forms.

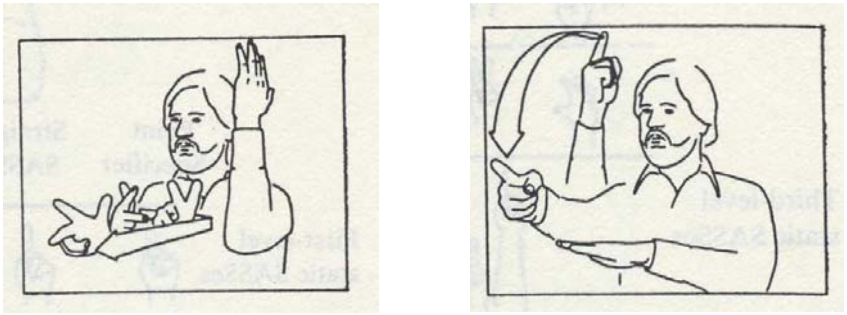

Figure 1: Long object classifier (Suppalla 1986:205)

1a. The car turns to avoid hitting a tree

1b. The telephone pole falls down

Chaining is also present in ASL classifiers. This is the process through which categories are associated with each other. Suppalla pointed out the *vehicle* classifier, which etymologically arose from the sign for ship, as shown in Figure 2 (1986). The ship sign then presumably became linked to other vehicles for transportation, eventually coming be the classifier for vehicles. This classifier expanded to be used to classify the arguments car, train, bicycle, ship and other vehicles. The Specific Knowledge of their relevant use to a modern society has chained all of these objects together into one class.

Origins of Classification.

This short discussion of some linguistic classifiers begs the question of origins. Since Chomsky's proposal of the language organ, any linguistic universals have usually been attributed to features of such an organ (Deacon 1997). Chomsky's language organ accounts for all regularities among languages and differences are characterized as marginal. For the purposes of classification, the human cognitive principles of classification – analogy, centrality, chaining and use of specific knowledge – would be understood as the universal structures. The variation of particular information highlighted as relevant in each culture – myth for the Dyirbal, historical familiarity for the Jacaltec and function and shape for ASL –would be the marginal differences.

Cultural Variation in Classification.

Durkheim and Mauss's argument for the moiety as the basis for cultural classification holds true for linguistic classification. The relationships between social structure and classification are not as apparent, but are taken to one more level of abstraction. Social structure may be the first organizing principle, argued by Allen (2002) and Bloor (2005). The relevant organizing principles of a culture change to reflect their society and their classification mirrors that cultural/historical importance.

Each of the linguistic classification systems discussed above highlights different distinctions in their environment. The connection for ASL is less clear, but as a young language the classes may develop into more culturally relevant distinctions. I return to discussion of ASL below.

The Dyirbal and Jacaltec classifications are more clearly linked to society and culturally specific knowledge. These systems focus on the apparently basic binary oppositions between natural classes. However, the delimitation and importance of such classes are not natural, but culturally determined. These are such oppositions as male/female, black/white, familiar/unfamiliar, etc. These classes have fuzzy boundaries; they are not clearly demarked sets. As the above discussion shows, they are set by the people who use the language.

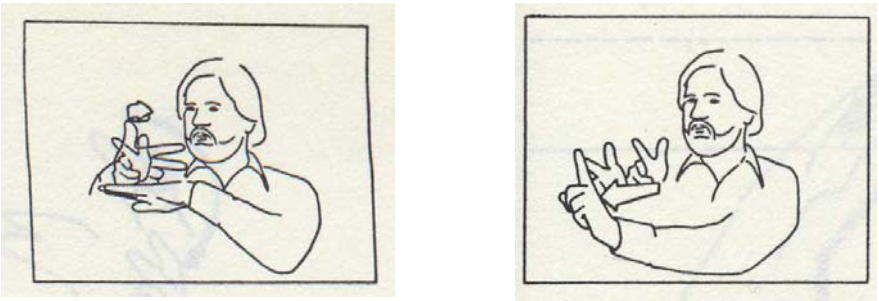

Figure 2: Vehicle classifier (Suppalla 1986:205)

2a. The car skids on the road 2b. The car hits a telephone pole

In Dyirbal, the male/female, animate/inanimate and edible/inedible binary sets are most salient (Lakoff 1987). These distinctions are to a large degree associated with social factors, considering the large role of myth in determining the boundaries for unclear cases. For example, birds in Dyirbal are in class II instead of class I which contains animals. Birds are linked to female spirits in a Dyirbal myth – this mythical link is given priority in the classification (Lakoff 1987).

For Jacaltec, the first group of classifiers clearly reflects social structure; it determines how one should interact with people of higher and lower status. This is a

Durkheim-Maussian system where social rules determine classification. The second group of classifiers also reflects the social institution, classifying the traditional trades of women and men as separate and distinct – thread, twine and cloth as the primary symbols of women's work and corn as the main agricultural crop (Craig 1986).

ASL has a more recent history as a formal language. The ASL community is not as clearly historically linked to the objects the ASL system classifies so a clear relationship is harder to point to. The modern American culture in which ASL is situated does not have a social structure comparable to the Australian or Jacaltec societies. The further development of ASL classifiers may tell us more about how other classification systems change over time and how they relate to social organization. However, the important features in ASL classification are those we would expect in a modern society; the classes emphasize form and function. The social status classifiers are present, but are by no means the majority of the ASL classification system. All of the ASL classifiers discussed here rely in some way on group membership: size and shape groups, social status groups and broken versus intact. Although the social structure and historical cultural group arguments presented by Durkheim and Mauss are not relevant for the ASL community, it is likely that the same categorization principles are at play – those of identifying groups and their members analogously to society.

The evidence for culturally relevant information and historical motivations for linguistic classification supports Durkheim and Mauss's theory for a social institution model for classification. The incorporation of socially determined information cannot be accounted for by other origin theories of classification.

Universals of Classification.

Chomskian linguists argue that their aim is to uncover the underlying structure, which is species endowed. The internal functions of language are mental and any external uses of language have no bearing on his project to understand the human mind (Chomsky 1965). Language most likely does have a strong mental aspect – but such mental structures may not be specific to language. They may be better understood as greater cognitive principles of the human mind than as language specific structures. Looking at classification as an example of a process that is apparent in language and culture, we find examples that suggest uniquely human capabilities are not language specific, but human specific and may have developed out of societal structure.

I turn to a more detailed look at the infinite nature of language as an example. Linguistic creativity, or the ability for language to meaningfully account for new situations, is one feature that Chomsky attributes solely to language. "Language provides finite means but infinite possibilities of expression" (Chomsky 1966:29). As Chomsky points out in *On Nature and Language* (2002), the problem of infinite expression has intrigued scholars for years. He quotes Charles Darwin: "man differs solely in his almost infinitely larger power of associating together the most diversified sounds and ideas" (Chomsky 2000:46). Chomsky concedes that early linguists could not be expected to understand how finite means could provide infinite expressions without the fairly recent definition of *recursion* by those working on formal systems. Recursive processes unlocked the mystery of linguistic creativity and in Chomsky's words (1965:8) "there is, in short, no longer a technical barrier to the full-scale study of generative grammars."

This adoption of recursion for Chomsky confirms his conclusion that language is a unique mental process.

> "Essential characteristics of human language, such as the discrete-infinite use of finite means that intrigued [Darwin] and his distinguished predecessors, appear to be biologically isolated… part of the genetic endowment" [Chomsky 2002:49].

He even goes on to claim in Hauser, Chomsky and Fitch (2002:1569) that the language organ "only includes recursion and is the only uniquely human component of the faculty of language." Language is understood as these rules which provide an explanation as to how finite means can create infinite possibilities. Classification systems in the Durkheim and Maussian view add to this discussion in two ways. First, as the language organ dwindles to recursion, social and general cognitive explanations for language abilities are necessary. Durkheim and Mauss's view of categorization supports this conclusion and situates categorical ability outside of the linguistic endowment.

Second, classification systems may provide a precursor ability to recursion to avoid the hopeful monster problem. Classification displays a similar rule-based, recombining system to that unique ability of language. As discussed above, the ASL class of broken things adapts to account for specific situations. Foreign items borrowed into Dyirbal fall into a class determined by the principles described by Lakoff.

> Fruit, flour, cake (made from flour), and wine (made from fruit) are in class III. White man is in class I, and white woman is in class II. Matches and pipes (concerned with fire) are in class II with fire, but cigarettes (leaves which are consumed) are in class III [1987:95].

The principle of chaining alone may be seen as an instance of an iterative rule application. Through experience or knowledge, objects are linked to other objects in an apparently endless cycle. This is a recursion-like ability in that new items are nested into the category based on reapplication of the rules. Examples of this are frequent in the Chinese classification discussed by Durkheim and Mauss: "Thus a hill or geographic configuration which looks like a tiger belongs to the tiger and to the west; if it resembles a dragon, it belongs to the dragon and to the east" (1963:68). The similarities between cultural and linguistic classification outlined in this article call for a more general theory of classification than that of the language organ. Classification clearly applies in a wider scope than merely within language. The cognitive principles that govern classification are greater principles that underlie human behavior, not just language.

Conclusion.

In this article, I argue that classification systems that are overtly marked in language and those that are not are essentially the same phenomenon. Both have a functional motivation to provide the people who use them with a system through which to view their world. This is an important function which may allow humans to interact with their environment more successfully.

I support Durkheim and Mauss's argument that there must be a social origin for all such classification. Durkheim and Mauss conclude that "in order for it to be possible for ideas to be systematically arranged for reasons of sentiment, it is necessary that they should not be pure ideas, but that they should themselves be products of sentiment" (Durkheim and Mauss 1963:85). The nature of classification is symbolic. There is a human element to the classifications that goes beyond the physical properties of things into a symbolic understanding of the world. The socially highlighted information in such classification is the important feature.

Such a social argument also has greater support for a causal theory than the other options, namely that of a single genetic mutation which allowed for linguistic ability. The social/historical account provides a possible causal link between primitive social rules and higher categorical thought. It does not fall victim to the "hopeful monster" problem that Chomsky's language organ does.

Greater cognitive principles likely do contribute to classification. These are however not language specific. An understanding of linguistic and cultural classification as two instances of the same phenomenon may lead to a better understanding of these greater cognitive principles. The influence of social and historical patterns on language displayed in classification argues strongly that these factors should be considered in an overall theory of language. The arbitrary and complex system of language has a correlate in social classification that should not be ignored in accounts of language. The focus of uncovering a physically real language organ in linguistics is based on an understanding that language is a unique phenomenon in this world. The linguistic pursuit to explain and

account for the systems of human language may be misguided to ignore other complex systems in human behavior.

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