THE UNIVERSITY OF CHICAGO

# NOUN CATEGORIZATION IN OJIBWE: GENDER AND CLASSIFIERS

A DISSERTATION SUBMITTED TO

THE FACULTY OF THE DIVISION OF THE HUMANITIES

IN CANDIDACY FOR THE DEGREE OF

DOCTOR OF PHILOSOPHY

DEPARTMENT OF LINGUISTICS

BY

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CHICAGO, ILLINOIS

AUGUST 2020

For Ron Clark and Doc

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## ACKNOWLEDGEMENTS

I would first like to acknowledge the contributions of Leonard and Elizabeth Kimewon to this project. They shared their time and patience, as well as intimate knowledge of the Ojibwe language. Even as I asked them to count many boring things, repeatedly, in order to better understand the classifier system, they were supportive, encouraging, and most importantly, brought their great senses of humor to our meetings. I always looked forward to Leonard's storytelling, too. Though Leonard has now walked on, and Elizabeth resides with family outside the Soo, their memory is carried on by their many friends and students there. I am honored to have known and worked with them, even if only for a short time.

I am equally grateful to Susan and John Askwith, who opened up their home to me. As my family left the Soo for Detroit several generations ago, I was a fish out of water there, but Susan and John made me feel welcomed. Susan, a longtime friend and language student of the Kimewons, has been both helpful and kind in coordinating our get-togethers, taking me along to Leonard's language classes, introducing me to friends and showing me around town. I cannot begin to express how grateful I am, and how lucky I feel, to have met such golden people. Susan, thank you for the wonderful book, podcast and class recommendations you send my way, and especially for equipping me with my very own *Nishnaabemwin Reference Grammar*! I am grateful to my tribe, especially those in the Culture Department, for connecting me with the Askwiths and Kimewons, and for supporting the language classes.

I am also so grateful for the support of Margaret Noodin, who has worked tirelessly to support Native initiatives, our students, the vitality of our language, and driven countless hours to connect Nishnaabeg across state lines and country borders. Miigwech for blazing the path

forward in academia and for bringing so many up with you, whether it be at conferences or supporting language warriors on our reservations; you are creating the change we need.

To my committee chair, Amy Dahlstrom, you have been my main pillar of support through this wild ride that is graduate school. You have been unwavering through my ups and downs, always encouraging. Thank you for lending me your confidence when I could not find my own. Thank you for sharing your expertise and introducing me to amazing researchers doing exciting work in this area.

To my advisor and committee member, Salikoko Mufwene, you have taught me to be strong, to fight for my ideas and how to defend them well. You have been absolutely influential in shaping the way I view not only language, but all of scientific inquiry, with a healthy dose of skepticism. Thank you for the time and attention you poured into me, and for pushing me to succeed.

To my advisor and committee member, Itamar Francez, you have a knack for stripping away pretense and getting right down to the heart of any theory or proposal. Our candid discussions have provided me an immeasurable amount of clarity and focus throughout this project, often revealing connections or implications I may not have realized on my own. Thank you also for your efforts to make academia a more welcoming, inclusive and just environment.

To the linguistics faculty not on my committee, but with whom I have met or been advised or taught by in the past, including Lenore Grenoble, John Goldsmith, Karlos Arregi, Diane Brentari and many others, thank you for being so good at your jobs. The linguistics department at the University of Chicago truly has a special quality in that there is such diversity in the approaches to language study, all done in a collegial and amicable environment. Thank you all for your dedication to your students, the rigor with which you conduct research and the

down-to-earth attitude that makes it all work. Natalia Bermudez, I cannot thank you enough for your efforts in planning the event to celebrate indigenous languages. You were a kind, patient and reliable role model throughout, and I know you will continue to accomplish great things as a faculty member.

To the linguistics faculty at Wayne State, where I completed my undergraduate degree, including Lara Jones, Martha Ratliff and Ljiljana Progovac, thank you so much for keeping me on the path forward and believing in my ability to succeed from the start. I remember how I said in my exit interview that I felt like I did not know very much, and without skipping a beat, Ljiljana said, "Well, you know some things" and proceeded to remind me of some of the many things I had, in fact, learned, boosting my confidence in the process. The dedicated faculty at Wayne State, and those who ran the McNair Scholars Program, prepared me well for graduate school, even if I did not realize it at the time. Thank you, especially, to Lara Jones for taking me under your wing, training me in your lab, and supervising my final project. To a fellow Wayne State linguistics alumnus, Sarah Murray, whom I did not meet until my time at the University of Chicago, thank you for helping me to feel at home at the Algonquian conference and for your continued support.

I am indebted to the scholars of Ojibwe that have come before me: Rand Valentine, Rich Rhodes and John Nichols. Thank you for giving me something to build on. To my colleagues at the Algonquian Conference, including but not limited to Conor Quinn, Carol-Rose Little, Monica Macaulay, Yolanda Pushetonequa, Ryan Henke, Vincent Collette, thank you for making it such a welcoming environment to learn and share research, and for your contributions to this project's development over the years. I would also like to thank the undergraduate research assistants who helped bring this to fruition through their participation in the department's Sapir

Scholars Program, including Anand Abram, Anna Whitney and Garrett Johnson. You have all proven yourselves to be highly motivated and intelligent researchers, with bright futures ahead! To my cohort mates and their significant others, Ross and Tatiana Burkholder, Hilary and Bryan Head McMahan, Carlos Cisneros, Emily Coppess, Julian Grove, Emily Hanink, Natalia Pavlou, Özge Sarigül, Adam Singerman, and Anqi Zhang, thank you for the wonderful memories. Though we are on different paths at this point, I am grateful to have shared this experience with all of you. To those outside my cohort, Robert Lewis, Gallagher Flinn, Vu Truong, Hannah McElgunn, Jessica Kantarovich, Corinne Kasper, I am also grateful for the chance to know and work with you all. Graduate school was certainly not a lonely time!

For my extended family, so many loving aunts, uncles, cousins and grandparents, thank you for being the village that raised me. A special thank you is due to the Glasgow family, who have taken me in as one of their own during my time here in Chicago. I am grateful to my loving sisters and my parents. Dad, you pushed me to gain real experience as a linguist while I was still an undergraduate, which turned out to be fantastic advice, and you still remind me to pace myself. I am grateful to my mom for making me a linguist, teaching me about my ancestors and how to live mino-bimaadiziwin. To Doctor Cledie Taylor and the staff at Arts Extended Gallery, I would not have made it this far without your love and support. Doc, you are a humble, fearless, kind, creative, brilliant, and compassionate individual; you are one preceded by your reputation in every sense, and I am grateful for every second I am in your company. I am equally grateful for the time spent with our late friend, Ron Clark, who was a best friend and guide to Jordan and me during our time in Detroit.

Last, but not least, to Emily, Ayaka, and niiji-Nishnaabe Sophia, thank you for your friendship, the phone dates, the laughs, commiserating, and being beautiful inside and out. I am

always learning from you ladies, and always proud to call you my friends. To my significant other, Jordan, you make the long workdays bearable. Thank you for making me laugh, for protecting, supporting and loving me. Here's to many more adventures together!

## ABSTRACT

Ojibwe is an Algonquian language spoken around the Great Lakes region of the United States and Canada. It has grammatical gender and a classifier system, which are rare in a single language (Corbett, 1991:137; Fedden and Corbett, 2017). I provide a detailed and typologically-informed analysis of numeral and verbal classifiers in Ojibwe. Numeral classifiers can be of two types: mensural, referring to measurements, and sortal, referring to properties such as dimensionality, size, and material. It is shown that these types can be distinguished by occurring with differing forms for the numeral 'one', and sortal classifiers are vital to understanding gender assignment. Assignment is mostly straightforward, with all nouns denoting humans and animals in the ANIMATE category, and the vast majority of nouns denoting inanimates in the INANIMATE category. However, some nouns with inanimate meanings are ANIMATE. Previously characterized as 'exceptions' to semantic assignment, they are motivated by compatibility with the semantics of one of these sortal classifiers, as illustrated by pairings of classifiers and nouns (1). I also discuss the role of analogical extension, dialectal variation, diachronic change and claims for an interaction of gender with the count/mass distinction.

1. a. /-aatig/ '1D, rigid', i.e. stick-like - *mitig* 'tree'
   b. /-aabiig/ '1D, flexible', i.e. string-like - *zesab* 'nettle'
   c. /-eg/ '2D, flexible', i.e. sheet-like - *asekaan* 'tanned hide'
   d. /-minag/ '3D, small, round', i.e. berry-like - *miskomin* 'raspberry'
   e. /-aabik/ 'mineral', i.e. metal, stone, glass - *asin* 'a stone'

## GLOSSING CONVENTIONS

| | | | |
|---|---|---|---|
| 0 | inanimate | IND | indicative |
| 1, 2, 3 | 1st, 2nd, 3rd person | int. | intended meaning |
| 1>0 | 1st person acting on inanimate | LM | lexical morpheme |
| 1D | one-dimensional | LOC | locative |
| 2D | two-dimensional | MASC | masculine gender |
| 3D | three-dimensional | NOM | nominalizer |
| 3’ | 3rd person obviative | NUT | neuter gender |
| AN | animate gender | OBV | obviative |
| CL | classifier | PASS | passive |
| CONJ | conjunct order | PL | plural |
| CT | class term | POSS | possessive |
| DEM | demonstrative | PRES | present tense |
| DIM | diminutive | PST | past tense |
| DIR | direct theme sign | SEM | semantics |
| DUB | dubitative | SG | singular |
| FEM | feminine gender | VAI | Animate Intransitive verb |
| FUT | future tense | VII | Inanimate Intransitive verb |
| IC | initial change | VTA | Transitive Animate verb |
| IN | inanimate gender | VTI | Transitive Inanimate verb |
| incl. | inclusive | | |

# CHAPTER 1

# NOUN CATEGORIZATION IN OJIBWE: GENDER AND CLASSIFIERS

## 1.1 Introduction

The goal of this thesis is to provide an account of the noun categorization devices of gender and classifiers found in Ojibwe. There are no accounts of both the gender and classifier systems in Ojibwe which draw on modern typological approaches to the study of noun categorization (Corbett, 1991 for gender; Grinevald, 2000 for classifiers; Aikhenvald, 2000 for gender and classifiers). The existence of a classifier system in Ojibwe is noted in grammars, but there is no modern and comprehensive description with a thorough inventory of classifier morphemes, their morphosyntactic loci, function or semantics (Baraga, 1878; Bloomfield, 1957; Valentine, 2001). This thesis is an attempt to fill this gap on the classifier system in the Ojibwe literature, as well as to discern its relationship to the gender system.

The gender system in Algonquian has garnered continued attention since the 1950s due to its bipartite, semantically-assigned values, which are devoid of biological sex, and are instead based on animacy (Greenberg, 1954; Hallowell, 1955; 1960; 1976; Black, 1969; Darnell and Vanek, 1976; Black-Rogers, 1982; Straus and Brightman, 1982; Corbett, 1991:20-24). A resurgence of interest in the last few decades centers on the apparent exceptions to semantic assignment, those ANIMATE nouns that have notionally inanimate referents, and turns a critical eye toward the necessity of conspicuous transparency for semantic assignment (Dahlstrom, 1995; Goddard, 2002; Quinn, 2001; 2018). More recently, research on the interaction of Algonquian gender with number and derivational processes has led to some radical claims about the nature of the system (Wiltschko, 2009; 2012; Mathieu, 2012a, b; cf. Meyer, 2018). This thesis attempts to

abate the exoticization of Algonquian gender by providing a full account of semantic assignment and derivational use of gender in Ojibwe, and contextualizing it with cross-linguistic data.

It is rare to find both gender and classifiers in a single language; in fact, each one is correlated with a different morphological type (Dixon, 1982; 1986; Corbett, 1991:137; Aikhenvald, 2000:6; Fedden and Corbett, 2017). It is not surprising that little is known of the interaction of gender and classifiers in a single language, given that classifiers (and noun classes) are themselves relatively new objects of linguistic study in comparison to gender (Kilarski, 2013:2). As such, it is also relatively recently that accounts of noun categorization as a whole have emerged (see Aikhenvald, 2000 for a typological account; Kilarski, 2013 for a historiographical account). Noun categorization is relevant for many areas of interest in modern linguistics, including but not limited to the syntactic and semantic nature of the agreement mechanism and its feature inventory, inflectional and derivational morphology, the link between language and cognition, and between language and culture (see Kilarski, 2013:1; Aikhenvald, 2000:5; Craig, 1986). This thesis contributes to more accurate theoretical approaches in these areas by bringing data from an understudied language to bear on the broader topic of noun categorization.

### 1.2 Main claims: the link between gender and classifiers

Algonquian languages have grammatical gender (contra Wiltschko, 2009; 2012), based on Corbett's (1991) definition of triggering agreement in associated words, which is shown with demonstratives and verbs. In Ojibwe, gender assignment is based on a semantic core of animacy, compatibility with sortal numeral classifiers and analogical extension. This analysis builds on similar work in related languages that identifies multiple semantic factors of motivation

(Dahlstrom, 1995 for Meskwaki; Goddard, 2002 for Algonquian languages generally; Quinn, 2003; 2018 for Penobscot). As classifiers play a role in assignment, the composition of gender values is heterogeneous, similar to assignment in the traditional language of Dyirbal, which is also entwined with a classifier system (Plaster and Polinsky, 2012). While this analysis cannot predict exactly how the constraints of assignment will be mapped to each individual noun in each speech community, it accounts for dialectal variation by providing a framework of diachronic understanding into how the system came to be the way it is, and the ways in which it is likely to vary (Lakoff, 1987).

This analysis of the gender system hinges on the corresponding comprehensive and typologically informed analysis of the classifier system. I identify two types of numeral classifiers, sortal and mensural, which are distinguished in the language by occurring with differing forms of the numeral 'one'. I also show that the inventory of verbal classifiers overlaps with, but is not identical to, that of the numeral classifiers. Classifiers are derived from nouns, but have their own characteristic set of properties, e.g. they do not inflect for number and they may co-occur with nouns, and are thus not to be analyzed as nouns. Other bound morphemes in Ojibwe, such as measurements of time and land, are semantically akin to mensural classifiers, but they do not occur with nouns in any context and are thus excluded from the classifier label.

The language has some homophonous nominal pairs, i.e. nouns that have identical forms, related yet distinct meanings and differing gender values. I term the process that produces them lexical recategorization, in contrast to nonce recategorization, i.e. gender shift in storytelling, which is a pragmatic process. I argue that these pairs must be analyzed as two separate nouns, and that they constitute evidence of a derivational use of gender, in contrast to claims that it is purely inflectional. I argue against claims that there is a formal link between the count/mass

distinction and the gender system, e.g. that the two are functionally equivalent (Wiltschko, 2009; 2012) or that a singulative system exists in the language (Mathieu, 2012ab), which are fueled by a very small subset of the nouns showing lexical recategorization. To this end, I also show that lexical recategorization is found even in languages with predominantly formal assignment. Lastly, I show that mass-denoting nouns that pluralize, claimed as evidence for a singulative system, have been misrepresented and instead represent a third type of nominal aspect (Rijkhoff, 1991, 2010), in addition to count and mass, called general nouns.

### 1.3 Ojibwe

Ojibwe is a member of the Algonquian language family, spoken in the Great Lakes region of the United States and Canada. While severely endangered, an estimate based on 2010 census data put the number of Ojibwe speakers in the United States just above 8,000, making it the ninth most widely spoken Indigenous language in the United States (Siebens and Julian, 2011). In the States, a robust revitalization effort is underway involving immersion programs, adult language classes and use of the language in schools throughout Ojibwe Indian Country.

Ojibwe is a polysynthetic language with arguments marked by verbal inflection, which has the effect that overt nouns are not grammatically required and thus appear infrequently. When nouns do occur, the relatively free word order and heavily inflected verb forms of the language mean that overt nouns are used to convey discourse information rather than argument roles.

Ojibwe encompasses many dialects (Rhodes and Todd, 1981; Valentine, 1994; 2001). There is a considerable mixture of people and languages between the alliance of tribes known as the Three Fires, consisting of the Ojibwe, Ottawa and Potawatomi. The boundaries delineating

dialects is blurred, as there are overlaps in the distribution of morphological and phonological properties, as well as a mixture of names used in different communities. As an example, various spellings and names for what I am referring to here as 'Ojibwe' include *Ottawa, Odawa, Ojibwa, Ojibway, Ochipwe, Otchipwe,* and *Chippewa*. The map below provides a conventional grouping and relative geographical locations of the dialects.

Figure 1. Map of Ojibwe dialects


Data used in this paper are drawn from the Ottawa, Eastern or Southwestern dialects. The most noticeable difference between these is a syncope process undergone by the Eastern and Ottawa dialects, which deletes unstressed vowels.[1] For instance, the endonym for the language is

[1] Starting from the beginning of the word, two syllables are organized into a metrical foot, with the first syllable being unstressed (weak) and the second stressed (strong). Vowels of weak syllables are deleted, with the caveat that only short vowels may be weak; thus, an initial syllable with a long vowel creates a defective foot. Lastly, final vowels must always be strong (Valentine, 2001:51-55).

*Anishinaabemowin* in the Southwestern dialect but *Nishnaabemwin* in the Eastern and Ottawa dialects. For the Eastern and Ottawa dialects, I draw mostly from Valentine's (2001) *Nishnaabemwin Reference Grammar* and for the Southwestern dialect, from Nichols' and Nyholm's (1995) *A Concise Dictionary of Minnesota Ojibwe,* as well as the invaluable *Ojibwe People's Dictionary*, which is accessible online. Other sources include Baraga's (1878) *A Dictionary of the Ojibway Language* and Bloomfield's (1957) *Eastern Ojibwa: Grammatical sketch, texts and word list.* The analysis of the classifier system was made possible by the contributions of speakers Leonard and Elizabeth Kimewon of the Sault Ste. Marie Tribe of Chippewa Indians, through field work conducted in the summers of 2017 and 2018. While we refer to the language as Ojibwe, their variety corresponds to the Ottawa dialect.

### 1.4 Summary of chapters

The dissertation is organized as follows.

In chapter 2, I define noun categorization and identify some of its specific instantiations in different languages, e.g. the count/mass distinction, gender, noun classes, classifiers. I compare the list of prototypical characteristics of gender/noun classes and classifiers (Grinevald, 2000; Dixon, 1982; 1986). I describe the correlation of noun categorization with morphological typology, i.e. that gender and classifiers have been thought to serve similar purposes in languages of different structures, explaining why they are rare in a single language and deserve treatment as a 'natural group' in the dissertation.

Chapter 3 has as its topic numeral classifiers in Ojibwe. I define numeral classifiers and discuss the relevance of the canonical characteristics introduced in the second chapter. I define mensural classifiers and sortal classifiers, providing an inventory and discussion of the behavior

of each, as well as document changes in the semantics of particular numeral classifiers. I also document a previously unnoticed distinction between these two types of numeral classifiers, that each occurs with a different root form of the numeral 'one'. Lastly, I exclude certain bound morphemes from the numeral classifier label, including measurements of time and land, as well as a former sortal classifier that has become lexicalized and no longer functions as such.

Chapter 4 covers verbal classifiers in Ojibwe. I define verbal classifiers and again discuss the relevance of the canonical characteristics introduced in the second chapter and provide an inventory of their forms. I clarify that verbal classifiers in Ojibwe are classificatory verbal affixes, as they have been mislabeled in the literature. I document distinctions between the inventories of numeral and verbal classifiers, noting that there is considerable overlap, and list different types of verbs that occur with classifiers. Lastly, I discuss the related phenomenon of noun incorporation, and how the boundary between the two is blurred.

In chapter 5, it is shown that many of the same morpheme forms that appear as numeral and/or verbal classifiers also appear in nouns. When in nouns, however, these morpheme forms do not function as classifiers proper. While the absence of the numeral or verbal classifier in the numeral or verb, respectively, results in broader semantics for the referent, comparable examples of nouns absent these morphemes result in entirely distinct referents. When occurring in nouns, these morphemes do not constitute noun classifiers, which always occur as independent morphemes from the nouns, rather, they are simply lexical morphemes. This analysis is supported by cross-linguistic comparison of the Ojibwe data with descriptions of noun classifiers, class terms and lexical morphemes.

In chapter 6, I start by discussing how animacy, which is at the core of grammatical gender in Ojibwe, may be incorporated in other languages outside of gender. I provide examples

illustrating agreement on demonstratives and verbs, which is the defining feature of grammatical gender. I introduce the notion of covert and overt gender in the discussion of gender marking on nouns. I then summarize gender assignment cross-linguistically, and how it may undergo diachronic change. I detail the evolution of analyses on the assignment mechanism in Dyirbal, as a case study to understand assignment in Ojibwe, before detailing how Ojibwe has figured into debates about assignment and analyses of assignment in Algonquian languages have changed. I then present my analysis of gender assignment in Ojibwe, which, like Dyirbal, is entwined with the classifier system, and accounts for nouns that were previously labeled as exceptions to assignment. I discuss further considerations for the analysis, including multiplicity of motivations, taxonomic effects, diachronic changes and dialectal variation.

In chapter 7, I make explicit the connection between assignment and the ability of grammatical gender to participate in derivational processes. I first discuss the well-known phenomenon of nonce recategorization, i.e. gender shift in storytelling, before moving on to lexical recategorization, which results in a new lexical item. This is illustrated by noun pairs showing identical surface forms, differing animacy and related meanings, which are constrained by the existing factors of semantic motivation in Ojibwe. I show that lexical recategorization is found across many languages having grammatical gender, even those with predominantly formal assignment. I argue that lexical recategorization results in two separate nouns, rather than one noun with variable gender values. I show how Construction Morphology, which allows new words to be created on the basis of abstract schemas and analogy with individual words, may be used to formalize lexical recategorization.

In chapter 8, I examine claims that gender and the count/mass distinction are formally linked in Ojibwe, and Algonquian languages generally. I first refute Wiltschko's (2009, 2012)

claim that animacy in Algonquian languages is not grammatical gender, but the equivalent of the count/mass distinction. Secondly, I argue contra Mathieu (2012ab) that Ojibwe, and Algonquian languages generally, do not embed a singulative system. I show that Ojibwe has a third type of nominal aspect, in addition to count and mass, called general nouns. I argue that the very limited data showing a pattern relating gender and the count/mass distinction are better contextualized as a result of the broader characteristic of semantic assignment. I show that gender and the count/mass distinction, more broadly understood as nominal aspect (Rijkhoff, 1991; 2010), are separate devices of noun categorization, evidenced by nominal aspect cutting across gender values.

In the concluding chapter 9, I summarize the function and semantics of gender and classifiers. There is both overlap and differentiation in the semantics of these systems. The function of both is reference-tracking and to add or highlight information about referents. Since the gender system has two values, it may be used to encode similarities between noun members of the same gender value, as well as differences between members and non-members. I also discuss areas for further research.

# CHAPTER 2

# NOUN CATEGORIZATION

## 2.1 Introduction

Noun categorization is an umbrella term for the various ways that languages sort nouns into groups based on semantic and grammatical distinctions. Specific types of noun categorization include the count/mass distinction, gender, noun classes, and classifiers. If we examine count and mass nouns in English, for example, one grammatical distinction between these two groups of nouns is that count nouns have both singular and plural forms (1), while mass nouns have only singular forms (2).[1] Semantically, count nouns represent entities that are distinct, countable units. Mass nouns, on the other hand, require a unit to be specified in order to quantify them, e.g. a *pail* of water.

(1) a. bicycle/bicycles b. raindrop/raindrops

(2) a. snow/*snows b. water/*waters

A single language may have multiple types of noun categorization. For example, German has the count/mass distinction and grammatical gender, while Ojibwe has the count/mass distinction, grammatical gender and classifiers. The next section defines and illustrates the main characteristics of grammatical gender cross-linguistically.

[1] Some mass nouns can be pluralized to indicate standardized units, e.g. asking a waiter for *two waters*, or differing kinds, e.g. *cow and soy milks,* but this is not the same as pluralizing a mass noun to indicate a larger quantity.

## 2.2 Gender cross-linguistically

Grammatical gender is pervasive, estimated to occur in just under half of the world's languages (Corbett, 2013). According to the World Atlas of Language Structures, of 257 languages surveyed, 145 have no gender system and 112 do have a gender system (Dryer and Haspelmath, 2013). Gender is spread across many language families and all around the globe, on every continent humans regularly inhabit. Gender is defined by agreement, i.e. the requirement of modifications in associated words, beyond the noun itself (Hockett, 1958:231; Corbett, 1991:4, 105). Every noun must receive a gender value, even neologisms and borrowings (Corbett, 1991:70-92). The gender value is inherent to the noun, and gender is thus differentiated from features such as number or case, for which a single noun can take multiple values (Corbett, 1991:146). The noun is said to be the controller of agreement, while other parts of speech are the targets of agreement. Cross-linguistically, some common parts of speech showing agreement with nouns are adjectives, demonstratives, determiners, though the targets vary for different languages (Corbett, 1991:106-15). In the following Spanish examples, it can be seen that the forms of the determiner and adjective vary based on the gender of the noun, either MASCULINE (3) or FEMININE (4).

(3) **el** perro mimad-**o**
the.MASC.SG dog.MASC.SG pampered-MASC.SG

'the pampered dog'

(4) **la** rata mimad-**a**

the.FEM.SG rat.FEM.SG pampered-FEM.SG

'the pampered rat'

Gender assignment is the method by which the gender value of a particular noun in a language is to be determined. Assignment is based on formal and/or semantic criteria, with formal criteria being phonological or morphological information. In gender systems with phonological assignment, such as Spanish, gender may usually be deduced based on the shape of the noun, e.g. an ending of /-o/ for MASCULINE and /-a/ for FEMININE. In gender systems with morphological assignment, such as Russian, the gender of a particular noun is largely based on declension classes and this is apparent only when whole paradigms are taken into consideration. In gender systems with semantic assignment, such as Ojibwe, the gender value of a noun is determined based on its meaning. Gender assignment is discussed in more detail in section 6.2.

### 2.3 Gender and noun classes cross-linguistically

According to a broad definition of gender based solely on agreement, noun classes, e.g. as found in Bantu languages, are regarded as gender (Corbett, 1991:5). In this view, the number of gender values within a language may vary anywhere from two up to approximately twenty.[2] However,

[2] Aikhenvald (2000) uses the cover term of *noun classes* to refer to gender and noun classes together, while Corbett (1991, 2014) instead uses *gender*. Somewhat confusingly, the terms *classifiers* and *classifier systems* are occasionally employed by Aikhenvald to refer collectively to gender, noun classes and classifiers. I use *noun categorization* as the umbrella term to avoid confusion.

this is not universally accepted, so it may be useful to maintain the distinction between gender and noun classes, since the latter have some pronounced differences, only a few of which I will highlight here. Most notably, noun class systems have a much higher number of values than gender systems. Systems with a smaller number of values are likely to be labeled gender, while those with a higher number of values are likely to be labeled as noun classes. Corbett (1991:9-10, 146) points out that the label applied to such a system in a given language, either gender or noun classes, may depend more on the linguistic tradition of the language family than the data. He offers the examples of Tamil and Karata. Even though the systems in both languages have three values, the former is labeled as having gender because it is a Dravidian language, while the latter is labeled as having noun classes because it is a North-East Caucasian language.

Additionally, agreement with noun classes is most often expressed through prefixes, rather than suffixes, as are most common in gender systems, and while gender agreement markers may form portmanteaus with the number feature, this connection is even tighter in noun class systems (Katamba, 2003:1; Corbett, 1991:45). Each noun class is either singular or plural. In the Swahili example, it is shown that the singular marker for 'basket' is noun class 7 (5a), and the plural marker is noun class 8 (5b), with which the adjective, numeral and verb all agree. When referencing the gender of a noun in a noun class system, it is standard practice to specify both the singular and the plural noun classes, e.g. 'basket' is gender 7/8.[3] Lastly, the derivational function of noun classes is more well recognized than in gender systems (Mufwene, 1980; Demuth, 2000), discussed further in section 7.3. While gender and noun classes show enough

[3] The agreement markers in this example have the same form on the controller and all of the targets. This is called *alliterative concord* (Katamba, 2003:111), though it is not always present in noun classes.

similarities that they may or may not be grouped together, depending on how fine-grained the analysis, the morphosyntactic and semantic behavior of classifiers is quite different.

(5) a. **ki**-kapu **ki**-kubwa **ki**-moja **ki**-lianguka
7-basket 7-large 7-one 7-fell
'One large basket fell.' [Corbett, 1991:43]

b. **vi**-kapu **vi**-kubwa **vi**-tatu **vi**-lianguka
8-baskets 8-large 8-three 8-fell
'Three large baskets fell.' [Corbett, 1991:44]

### 2.4 Classifiers cross-linguistically

Classifiers are distinct from gender (and noun classes) in that they are not defined by agreement, though they may serve as a source for the creation of gender, as occurred in the Tyemeri group of the Daly languages (Tryon, 1974:231-3; Corbett, 1991:140). Classifiers are defined as free or bound morphemes occurring in specifiable morphosyntactic units that denote a property of the referent of a noun and may co-occur with that noun (Aikhenvald, 2000:13, Grinevald, 2000:64). The portion of the definition referring to 'specifiable morphosyntactic units' is important because the current classifier typology relies on identifying the locus of classifiers, i.e. the morpheme to which it is adjacent or attached (Grinevald, 2000:62-3; Aikhenvald, 2000:13). This typology was developed to distinguish different types of classifiers, both across and within languages (Grinevald, 2000:58). Classifiers may occur within the noun phrase, e.g. numeral classifiers in Japanese (6) and noun classifiers in Jakaltek (7), or outside of it, e.g. verbal classifiers in Cayuga (8).

(6) a. enpitsu ni-**hon**

pencil two-long.cylindrical.CL

'two pencils'

b. hon ni-**satsu**

book two-bounded.CL

'two books' [Matsumoto, 1993]

(7) xil **naj** xuwan **no7** lab'a

saw man.CL John animal.CL snake

'John saw the snake.' [Grinevald, 2000:65]

(8) so:wa:s akh-**nahskw**-ae'

dog I-domestic.animal.CL-have

'I have a (pet) dog' [Mithun, 1986:386-8]

Classifiers may serve various functions (Aikhenvald, 2000:319-20). They individuate, i.e. to make countable a noun which is unspecified for shape (i.e. mass, general or concept nouns, see Rijkhoff 1991; 2010; Dik, 1989:123), highlight some particular aspect of a referent, or supplement nouns with highly generalized meanings. This allows a structured mechanism, based on the available classifier semantics, to avoid enlarging the lexicon. Examples showing this derivational function with numeral classifiers are given below for Yucatec Maya. The same noun, *há'as* 'banana', may refer to denotata as diverse as a single banana, a bunch of bananas, a bit of the fruit, the tree or the leaf. The broad semantics of the noun are narrowed when combined with a classifier.

(9) a. ‘un-**tz’íit** há’as

one-1.dimensional.CL banana

‘one banana fruit’

b. ‘un-**wáal** há’as

one-2.dimensional.CL banana

‘one banana leaf’

c. ‘un-**kúul** há’as

one-planted.CL banana

‘one banana tree’

d. ‘un-**kúuch** há’as

one-load.CL banana

‘one bunch of bananas’

e. ‘um-**p’íit** há’as

one-bit.CL banana

‘one bit of banana (fruit)’ [Lucy, 2000:329]

The inventory of classifiers is much larger than gender and even noun class values, potentially reaching into the hundreds in some languages. Classifier systems may also form an open class, allowing new members, while gender systems are closed. A noun may take more than one classifier, sometimes even in the same clause as shown in the Yidiny (10) example below, depending on the intended meaning, while other nouns in the language may take no classifier at all. For example, in Jakaltek (Mayan), Craig (1986:267-74) reports that noun classifiers exist for many physical materials, e.g. cloth, soil, rock, water, but there are no classifiers compatible with

nouns referring to unidentified materials and mixed substances such as beer, coca-cola, and smoke.

(10) **bama** **waguuja** wurgun

person.CL man.CL pubescent.boy

'teenage boy' [Dixon, 1982:192]

This variable applicability, i.e. some nouns occurring with multiple classifiers and other nouns being incompatible with any classifier whatsoever, is in contrast to the static, obligatory categorization of all nouns in a gender system (Aikhenvald, 2000:334). The use of classifiers in a particular language may be obligatory or there may be a degree of optionality, dependent on discourse function or speaker stylistics (Corbett, 1991:136). The use of classifiers in non-obligatory systems usually correlates with some pragmatic function, be it reference-tracking, specificity, definiteness, topicality or discourse-salience (Aikhenvald, 2000:333). Pragmatic functions may be present in obligatory classifier systems as well, though to a lesser degree. These are all arguments against the long-standing view that classifiers are redundant (Aikhenvald, 2000:319; Kilarski, 2013:3; Denny, 1976:1).

### 2.5 Comparison of gender and classifiers

Earlier comparisons of gender and classifiers led to claims that they differed in degrees of grammaticalization, with that of classifiers remaining incomplete (Dixon, 1982; 1986; Grinevald, 2000:61). Later work has argued for a separation of the characteristics of each noun categorization device with grammaticalization (Grinevald, 2002; 2015), as some classifier systems are considered highly grammaticalized, e.g. in the Chibchan language family of Central

America (Grinevald, 2015:816). The prototypical characteristics of gender and classifier systems are shown in Table 1 (adapted from Grinevald, 2000:62; Grinevald, 2015:816). Opposing characteristics highlight their differences, though it must be noted that there is variation in classifier systems across languages. Perhaps the most important distinction is that gender is considered a feature of the noun, while classifiers are noun modifiers, exemplified by the characteristic that classifiers are never affixed to the noun.

Table 1. Comparison of characteristics in gender/noun classes and classifiers

| **Gender and noun class systems** | **Classifier systems** |
|---|---|
| Classify all nouns (exhaustive) | Do not classify all nouns (non-exhaustive) |
| A noun belongs to a single gender/class | A noun may occur with different classifiers |
| Noun obligatorily has gender/class value | Noun may not occur w/classifier, dependent on discourse factors or (formality) register |
| Closed system | Open system |
| May be marked on the noun | Never affixed to the noun |
| Realized in agreement patterns | Marked once, no agreement |
| May fuse with other features, e.g. number | Not fused with other features |

All systems of noun categorization share the function of contributing information about types or classes of referents. This is evidenced by the presence of at least a core of semantic motivation in every system, even in gender systems with a high degree of formal motivation (Corbett, 1991; Lucy, 2000:330, Aikhenvald, 2000). Additionally, reference-tracking has been proposed as a major function of gender systems (Corbett, 1991: 320-3), as classifier systems may have anaphoric functions (Aikhenvald, 2000:329-30).

## 2.6 Correlations with morphological typology

In one view of morphological typology, languages are categorized according to the number of morphemes in their words, i.e. the index of synthesis (Comrie, 1989) or morpheme-per-word ratio.[4] On the low end of the scale are analytic languages, which lack inflectional morphology, e.g. Mandarin Chinese (11). Languages with a high morpheme-per-word ratio are called synthetic. If a language is synthetic, having multiple morphemes in a single word, we can consider how those morphemes combine, i.e. the index of fusion (Comrie, 1989). If they stack together and are easily segmented, the language is termed agglutinative, e.g. Southern Tiwa (12). If the morphemes are somehow phonologically fused, obscuring segmentation, the language is termed fusional, e.g. Ancient Greek (13).

(11) tā zài túshūguǎn kàn bào

he at library read newspaper

'He's at the library reading a newspaper.' [Li and Thompson, 1981]

(12) Ti-khwian-mu-ban

1.SG-dog-see-PST

'I saw the dog.' [Allen, et al., 1990]

(13) lu-omai

release-1.SG.PRES.PASS.IND

'I am being released' [Whaley, 1997:134]

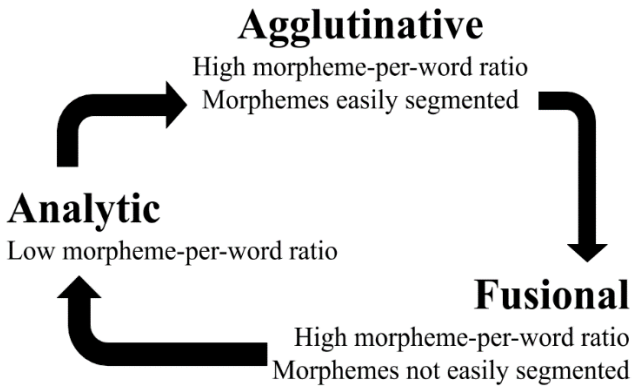
[4] Some researchers claim this typology conflates what should be regarded as separate variables of fusion, exponence and flexivity (Plank, 1999; Bickel and Nichols, 2005; as cited in Bickel and Nichols, 2013).

Classifiers are usually found in analytic languages (Dixon, 1982; 1986; Aikhenvald, 2000:6), while gender is found in fusional languages. Corbett (1991:137) writes,

> Thus there is a correlation between language type and the presence of classifiers or genders, and this correlation is exactly as we would expect. It suggests that the two systems may perform similar roles in languages of different morphological types. But the correlation is far from absolute. Exceptionally, a language can have both gender and classifiers.

This is exactly the situation in Ojibwe, an agglutinative language. Agglutinative languages are thought to be the middle step in a cyclic change from analytic to fusional, then back to analytic (Dixon, 1997), as illustrated in Figure 2.[5] If classifiers are attested most often in analytic languages and gender most often in fusional languages, it is perhaps no surprise that a language with both systems would be agglutinative. This does not, however, give any indication of how both systems function in a single language.

Figure 2. Cycle of morphological typology




[5] I am unaware of a single language known to go through every stage, though we are aware of changes from one morphological type to another, e.g. English used to be fusional, but is currently analytic.

# CHAPTER 3

# NUMERAL CLASSIFIERS

## 3.1 Introduction to numeral classifiers

Numeral classifiers occur in contexts of quantification (Aikhenvald, 2000:98). In Ojibwe, classifying morphemes are suffixed to numeral roots to create classifier-specific numerals (Valentine, 2001:883).[1] The following textual examples show the use of classifiers in numerals with overt nouns.[2]

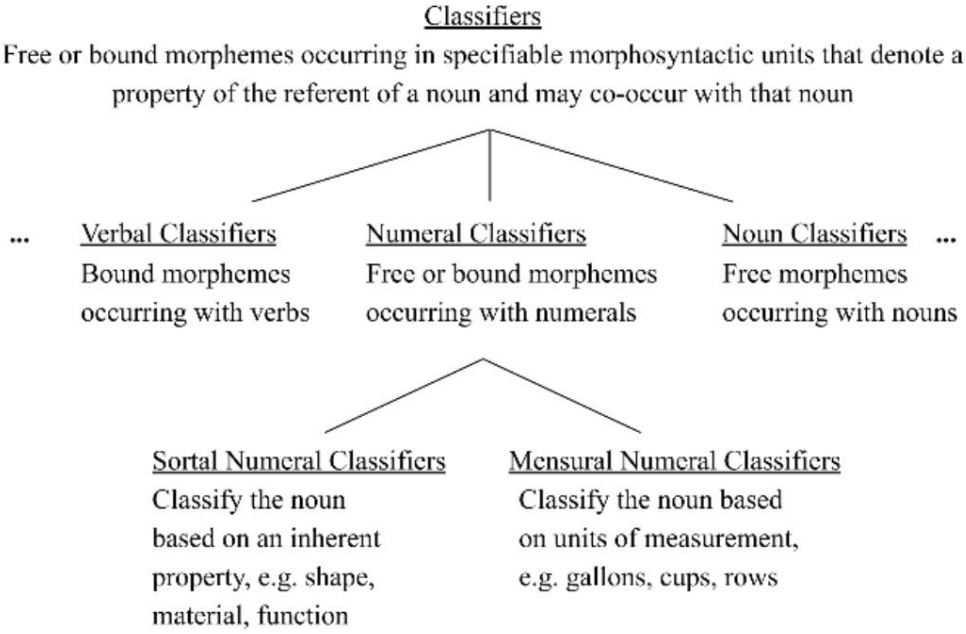
(14) Mii dash iw niibwa gii-nangdaaso, bezhig baashkzigan
And so that.IN.SG lots PST-charge.VAI.3SG one rifle.IN.SG
miinwaa **bezhgw-aatig** **wiishkii**
and one-wooden.CL whiskey
'And he charged a lot, one gun and one bottle of whiskey'
[Nichols, 1988:95]

(15) ...miinwaa **ngod-wewaan** w-gii-miinaan **niw** **mkizn-an**.
and one-pair.CL 3-PST-give.VTA.3' those.IN.PL shoe.IN-IN.PL
'... and she gave her one pair of shoes.'
[Valentine, 2001:884]

[1] Valentine (2001:572) remarks that the use of the wooden classifying morpheme in (14), translated as 'bottle', evokes the past use of wooden containers to store liquor.
[2] Algonquian languages allow constituents to be discontinuous around the verb, following certain constraints, as shown in (15). See Kathol and Rhodes (1999) for further details.

In her classifier typology, Aikhenvald (2000:99) states that the existence of numeral classifiers in a language 'presupposes that numerals are a special word class.' This is in contrast to languages that have an extremely small inventory of numbers, perhaps limited to 'one', 'two', 'three' and 'many.' Ojibwe has an extensive inventory of numerals, certainly garnering the designation as a special class. Baraga (1878:306) identifies no less than five distinct types of numerals, including, among others, distributive and multiplicative types. For instance, there are the simple cardinal numbers, *bezhig* 'one', distributive numbers *bebezhig* 'one each', and multiplying numbers *aabiding* 'once'.

Figure 3. Context of numeral classifier types




Just as classifiers are divided into different types based on their morphosyntactic loci, numeral classifiers also have subdivisions. The two types of numeral classifiers are mensural and sortal (Grinevald, 2000:64; Aikhenvald, 2000:114-5). Mensural classifiers specify measurements

of the noun denotatum. Sortal classifiers denote an inherent property of the noun denotatum, such as shape, flexibility or material. Numeral classifiers are contextualized within other classifier types in Figure 3.

In the following sections, I describe both mensural and sortal numeral classifiers and provide an inventory and updated semantics of their forms in Ojibwe. I review earlier descriptions of these classifiers and make several clarifications, excluding certain forms from the numeral classifier label.

### 3.1.1 Classifier position in internal word structure

A brief discussion about the position of classifiers in the internal word structure of Ojibwe is in order. Algonquian words maximally have a tripartite structure, consisting of what are commonly referred to in the literature as initials, medials and finals (cf. Goddard, 1990, inter alia). Internal structure for initials, medials and finals may be further distinguished, as illustrated in Figure 4.

Figure 4. Internal word structure of Ojibwe

| Initial | | Medial | | | Final | |
|---|---|---|---|---|---|---|
| Root | Post-Radical | Pre-Medial | Medial | Post-Medial | Pre-Final | Final |

Initials, medials and finals may all contribute semantic content. In addition, finals also signal the part of speech, whether a noun or a verb. Classifiers occur as medials, though this may sometimes be obscured if they are followed by a stem-final /w/ or /y/ (Valentine, 2000:338, 477, 481-2, 499-501), i.e. these finals are apparent only when additional suffixes are present.

Valentine (2000: 331, 345-7, 435-7, 465, 883-5) refers to these morphemes as 'classificatory medials' at times, and 'classifiers' at others.

In the following sections, I describe both mensural and sortal numeral classifiers in Ojibwe, providing their inventories and semantics. I also discuss some related bound morphemes that should be excluded from the classifier label, such as measurements of time in the context of numeral classifiers.

### 3.2 Mensural classifiers

In many languages, Ojibwe included, nouns are divisible into count and mass categories (Mathieu, 2012a, b; Meyer, 2018). Mass nouns generally denote a substance and lack clear units, as well as plural forms. Count nouns, on the other hand, have clear units and plural forms. Mensural classifiers may combine with both count and mass nouns, with a slight difference in the semantics of the classifiers. For mass nouns, classifiers specify units of measurement, as shown in (16).[3] For count nouns, they may specify measurements or arrangements, as shown in (17). The following examples also show that these classifiers occur with nouns of both genders values, INANIMATE nouns in (16a, 17a) and ANIMATE nouns in (16b, 17b).

[3] In some dialects, *giigoonh* 'fish' is a count noun with the plural form *giigoonyag*, but the speakers I worked with rejected the plural. One might question whether this is accurate for Ojibwe or a result of English contact. While contact is a possibility, there is variation in the categorization of entities as count or mass. For example, why are *corn(*s), rice(*s)* and *spinach(*es)* all mass nouns in English, but *pea/peas* is count? Conventionalization is variable in the application of the count/mass distinction, both across languages and across dialects, and Ojibwe is no different. As another example, Mathieu (2012a:184) lists *semaa* 'tobacco' as plural *semaag* based on fieldwork with native speakers at Cape Croker, but no such plural exists in the Southwestern variety or with the speakers in Sault Ste. Marie.

(16) a. niizho-**kikoons** makade-aaboo

two-can.CL black-liquid.IN

'two cans of coffee'

b. ngo-**dbaabiishkoojgan** giigoonh

one-pound.CL fish.AN

'one pound of fish'

(17) a. ngod-**wewaan** mkzin-an

one-pair.CL shoe.IN-IN.PL

'one pair of shoes'

b. ngodo-**gamig** Nishnaabe-g

one-houseful.CL Nishnaabe.AN-AN.PL

'one houseful of Nishnaabeg'

Cross-linguistically, classifiers do not bear the feature of number, i.e. they do not have singular and plural forms, only their associated nouns do (Aikhenvald, 2000:249). Ojibwe has number feature values of singular and plural. Count and mass nouns in constructions with mensural classifiers behave as we might expect with regards to the feature of number, i.e. count nouns are plural when semantically appropriate, as shown in (18), while mass nouns are never plural, as shown in (19).

(18) a. Ngo-mishkamodens zhigaangwish-**iig** n-wii-giishnan-aag.

one-bag.CL onion.AN-AN.PL 1-FUT-buy.VTA-3.PL

'I will buy one bag of onions.' [Kimewon, n.d.]

b. ngod-makakzaga'igan-**an**

one-box.CL nail.IN-IN.PL

'one box of nails'

(19) a. Nswi-mooday minwaagmig n-giishnad-oon.

three-bottle.CL pop.IN 1-buy.VTI2-1>0.SG

'I am buying three bottles of pop.' [Kimewon, n.d.]

b. niizho-dbaabiishkoojgan giigoonh

two-pound.CL fish.AN

'two pounds of fish'

c. *niizho-dbaabiishkoojgan giigoon-**yag**

two-pound.CL fish.AN-AN.PL

int. 'two pounds of fish'

Table 2 is an inventory of mensural classifiers. Try as I might to be exhaustive, there are most certainly mensural classifiers not included here. There are many more mensural classifiers than sortal ones, which is typologically expected (Grinevald, 2000:64). For considerations of space, each mensural classifier, shown in bold, is accompanied by the number 'one' and an overt noun.

Table 2. Inventory of mensural classifiers

| **Classifier example** | **Translation** |
|---|---|
| ngo-**dba'gan** gdagiigin | one yard of fabric |
| ngo-**dba'gaans** sabaabiis | one inch of string |
| ngodo-**zid** zenbaanh | one foot of ribbon |

Table 2. Inventory of mensural classifiers, continued

| | |
|---|---|
| ngodi-**nke'awaak** zenbaanh | one arm span of ribbon |
| ngodo-**kik** nbiish | one pailful/kettleful of water |
| ngodo-**kikoons** semaa, ngod-**kikwaakoons** semaa | one can of tobacco |
| ngod-**oonag** Nishnaabeg, ngo-**jiimaan** Nishnaabeg | one boatload of Nishnaabeg |
| ngo-**shkimod** piniig | one bagful of potatoes |
| ngo-**shkimdenhs** piniig | one small bagful of potatoes |
| ngod-**ooshkin** piniig | one large bagful of potatoes |
| ngod-**shkimdes** baaghaakwenh | one package of chicken |
| ngod-**wewaan** mkiznan | one pair of shoes |
| ngod-**wewaan** waanoon | one dozen eggs |
| ngodo-**naagaans** baasidongaak bkwezhgan | one cup of flour (for bread) |
| ngo-**mnikwaajgaanhs** minwaagmig | one cupful of pop |
| ngo-**mnikwaajgan** zhoomnaaboo | one gallon of wine |
| ngod-**emwkaan** zhiitaagan | one tablespoon of salt |
| ngod-**emkwaanes** zhiitaagan | one teaspoon salt |
| ngodi-**ninj** miinan | one handful of blueberries |
| ngo-**mkaksag** mide | one barrel of oil |
| ngo-**mkaksagonhs** zhgopwaaboo | one small keg of beer |
| ngo-**dbaabiishkoojigan** giigoonh | one pound of fish |
| ngodo-**gamig** Nishnaabeg | one houseful of Nishnaabeg |
| ngo-**achingan** Nishnaabeg | one roomful of Nishnaabeg |
| ngo-**doopwin** piniig | one tableful of potatoes |
| ngo-**daabaan** Nishnaabeg | one carload of Nishnaabeg |

Table 2. Inventory of mensural classifiers, continued

| | |
|---|---|
| ngod-**mkakoons** semaa | one pack/small box of cigarettes |
| ngod-**mkak** zga'ganan | one box of nails |
| ngo-**chmakak** zga'ganan | one large box of nails |
| ngo-**shkishgagan** zhoomnaaboo | one case of wine (12 bottles) |
| ngo-**zid-kakade'aa** naakaniigin | one square foot of flooring |
| ngodo-**mooday** nibi | one bottle of water |

A few words are in order concerning some of the forms and semantics of specific mensural classifiers. First, Baraga (1878:310) lists /dba'gan/ as a catchall measurement for 'yards, bushels, feet, etc.' Indeed, it has the semantics of 'measurement', composed of /dib-/, an initial with the meaning of 'judge, measure', /-a'w/, a VTA final meaning 'act on AN using a tool or medium', and the nominalizer /-n/. It remains in use for 'yards', though I am unsure how modern speakers would translate 'bushel', and 'feet' has been replaced with a more specific mensural classifier /zid/, from the body part term. Also likely an innovation, the body part term /zid/ 'foot' combines with the VII /-gakakaa/ 'be square' to form /zid-kakade'aa/ 'square feet'. Similarly, the mensural classifier /wewaan/ has the general semantics of 'a set' and can be used with nouns whose referents typically come in standardized units, e.g. pairs of shoes or a dozen eggs.

Next, *jiimaan* also occurs as an independent noun meaning 'boat.' Its use as a mensural classifier to mean 'boatload' is likely a modern innovation, since Baraga (1878:313) lists only the non-independent /oonag/ 'boatload'.[4] Baraga also (1878:311) lists /sag/ as the measurement

[4] Since both /*-oonag*/ and /*-jiimaan*/ currently exist as mensural classifiers for 'boatload, boatful', I tested whether there was any semantic restriction in their use with the noun *jiimaan*. For

for barrels, kegs or boxes. Currently, there are separate classifiers used for a barrel/keg, *mkaksag*, and for a box, *makak*. It seems that /sag/ no longer functions as a mensural classifier, though it is still in use as a verbal classifier.

There are two mensural classifiers meaning 'cupful', /mnikwaajgaanhs/ and /naagaans/. The former shares its form with the VAI verb *minikwe* 'to drink' and the latter with the independent noun *onaagaans* 'cup.' It seems the former has a more casual use, while the latter is used for the exact measurement of a cup, e.g. in recipes. The next section provides an inventory and discussion of the semantics of the other type of numeral classifier, sortal classifiers.

### 3.3 Sortal classifiers

Every language has measure terms, e.g. English *a head of cattle* or *a pair of shoes*, which may behave similarly to mensural classifiers, but not every language should be labeled a classifier language (Grinevald, 2000:58-9; Aikhenvald, 2000:115-6). The criterion for a true classifier language is the presence of sortal classifiers, which denote a physical property of the noun to which they refer, such as shape, flexibility or material, as shown in (20). Measure terms, in languages with sortal classifiers, act like sortal classifiers, hence the reasoning for labeling them as classifiers, as well. Examples of sortal classifiers in Ojibwe are shown below.[5]

Leonard, the following were acceptable for 'one boatload of boats'/'one boatload of small boats', e.g. a shipment of remote control boats or lifeboats, delivered via boat:
i. *ngod-**oonag** jiimaan*/*ngod-**oonag** jiimaanhs*
ii. *ngod-**jiimaan** jiimaan*/*ngod-**jiimaan** jiimaanhs*
One speaker fully accepted (i), but felt (ii) was not preferable, understandably so.

[5] Valentine (2001:883) refers to numerals with sortal classifiers as 'classificatory numerals'.

(20) a. bezhgwa-**mnag** sabaab

one-3D.small.round.CL ball.of.yarn.IN

'one (small, round) ball of yarn'

b. bezhigw-**aatig** kosmaan

one-1D.rigid.CL squash.IN

'one (1D, rigid) zucchini'

The following is an inventory of sortal classifiers.[6] For considerations of space, each sortal classifier, shown in bold, is accompanied by the number 'one' and an overt noun.

Table 3. Inventory of sortal classifiers

| **Classifier example** | **Translation** |
|---|---|
| bezhigw-**aatig** mtigoonhs | one (1D, rigid) small stick |
| bezhigw-**aabiig** naabkwaagan | one (1D, flexible) necklace |
| bezhigw-**eg** waabooyaan | one (2D) blanket |
| bezhgwa-**minag** sabaab | one (3D, small, round) ball of yarn |

It should be noted that these sortal classifiers are often glossed with the shorthand translations of /aatig/ 'stick-like', /aabiig/ 'string-like', /eg/ 'sheet-like' and /minag/ 'berry-like'. Also, there is a phonologically conditioned alternation between /eg/ and /iig/ '2D'. Valentine (2001:346, 501) states that stems ending in /w/ have the variant /eg/. So, /iig/ may be taken as the more basic form, but /eg/ more commonly surfaces. It is also worth noting that while sortal classifiers are

[6] There is one morpheme conspicuously absent from the inventory of sortal classifiers in Table 2, which is /aabik/ 'mineral'. Its exclusion is discussed in detail in section 3.5.2.

compatible with nouns of either grammatical gender (21), they are strictly for use with nouns having notionally inanimate referents (22).

(21) a. bezhigw-aabiig **naabkwaagan**
one-1D.flexible necklace.AN
'one (1D, flexible) necklace'
b. bezhigw-aabiig **sabaabiis**
one-1D.flexible thread.IN
'one (1D, flexible) thread'

(22) *bezhigw-aabiig **gnebig**
one-1D.flexible snake.AN
int. 'one (1D, flexible) snake'

These classifiers denote properties of nouns such as dimensionality, shape and flexibility (Valentine, 2001: 331). The sortal classifiers /aatig/ '1D, rigid' and /aabiig/ '1D, flexible' may also be translated as 'long, narrow, rigid' and 'long, narrow, flexible', respectively. The sortal classifier /eg/ '2D' may be translated as 'long, wide' and /minag/ may be translated simply as 'small, round'.

While the semantics of /aabiig/ '1D, flexible' and /minag/ '3D, small, round' seem relatively unchanged from the time of Baraga's (1878) grammar, the semantics of /aatig/ '1D, rigid' and /eg/ '2D' have been updated in Table 2 above. The first of these, /aatig/, has been glossed in a variety of ways, from 'wooden' to 'stick-like', which makes reference to shape, flexibility and material (Valentine, 2001:346, 572). The semantics of this classifier no longer refer to the wooden material, only the parameters of shape/dimensionality (long and narrow) and

flexibility (rigid, inflexible). The reference to material may have been due to the salience of its lexical origin from *mitig,* which means ‘stick, wood’ when INANIMATE and ‘tree’ when ANIMATE. Nouns with meanings that reflect the correct values of shape and flexibility, but not material, e.g. metal or plastic rods, are compatible (23). Nouns with meanings that include wood, but not the correct values of shape and flexibility, for example, a sheet of wood or a flexible wooden pole, are incompatible with this classifier (24). The semantics are more accurately described as ‘1D, rigid’ with reference only to shape/dimensionality and flexibility, but not material.

(23) a. bezhigw-aatig **biiwaabik**
one-1D.rigid.CL metal.IN
‘one metal rod’

b. bezhigw-aatig **kiwe’onaatik**
one-1D.rigid.CL flagpole.IN
‘one (plastic or metal) flagpole’

c. bezhigw-aatig **waazkonenjiganaatik**
one-1D.rigid.CL light.pole.IN
‘one (plastic or metal) light pole’

(24) *bezhigw-aatig **mgiskanaak**
one-wooden/one-1D.flexible.CL fishing.pole.IN
int. ‘one (1D, flexible) fishing pole’

One interesting use of /-aatig/ is found in *bezhigw-aatik bakwezhigan* ‘one loaf of bread’. While it is true that loaves of bread are not necessarily inflexible, they are not flexible, either,

since it is possible to break them in half. It may also make more sense to think of bread loaves shaped like baguettes, which are more stick-like, i.e. long, narrow and rigid, than conventional, shorter loaves of bread.

Second, the sortal classifier /eg/, has shown a change in semantics concerning flexibility. It is described by Baraga (1878:311) as used for clothing materials and has been translated as ‘sheet-like, cloth’ (Valentine, 2001:346). However, it is currently compatible with nouns having referents that are either flexible (25) or rigid (26). The semantics are then more accurately described as ‘2D’ or ‘long, wide’, with reference only to shape/dimensionality and not to flexibility, or the more specific material of cloth.

(25) bezhigw-eg **pikweshmooniigin**
one-2D.CL pillowcase.IN
‘one (2D) pillowcase’

(26) bezhigw-eg **biiwaabik**
one-long.wide.CL metal.IN
‘one (2D) sheet of metal’

### 3.3.1 Lexical origin of sortal classifiers

Grinevald (2000:61) states that classifiers have a clear lexical origin. Below, I point out nouns that may have served as the lexical origin for the sortal classifier forms in Ojibwe (27). The change from a noun to a classifier is accompanied by phonological reduction and the addition of pre-medial, e.g. /aa-/, or post-medial material, e.g. /-ag/.

(27) a. *w**iig**waas* ‘birch bark’ > /-iig-/ ‘2D’

b. *asab**aab*** ‘thread’ > /-aabiig-/ ‘1D, flexible’

c. *mi**tig*** ‘stick’ > /-aatig-/ ‘1D, rigid’

d. ***big**iw* ‘pitch, tar’ > /-aabik-/ ‘mineral’

e. ***miin*** ‘blueberry’ > /-minag-/ ‘3D, round’

Unrelated to their lexical origins, Valentine (2001:332) also notes the pattern of classifiers occurring with these pre-medial and post-medial elements. He comments that /aabiig/ ‘1D, flexible’ is likely a combination of /-aaby/ ‘continuous’ and the post-medial /-ag/ (Valentine, 2001:491). In the next section, I discuss a previously unnoticed distinction between sortal and mensural classifiers in Ojibwe.

### 3.4 Distinction between mensural and sortal classifiers

In some languages, the distinction between sortal and mensural classifiers goes beyond semantics to being reflected in the grammar, for example by showing distinct linking particles or behavior under anaphoric conditions (Grinevald, 2000:59, 64). There is at least one, very noticeable distinction between sortal and mensural classifiers in Ojibwe. That is, they are used with different forms of the numeral ‘one’. Mensural classifiers are used with /ngodw-/, while sortal classifiers are used with /bezhigw-/. The contrast is illustrated in (28-29).

(28) a. **ngod**-wewaan mkzin-an

one-pair.CL shoe.IN-IN.PL

‘one pair of shoes’

b. ***bezhgwa**-wewaan mkzin-an

(29) a. **bezhgwa**-mnag sabaab

one-round.CL ball.of.yarn.IN

'one (small, round) ball of yarn'

b. *__ngo__-mnag sabaab

Both forms for 'one' are traceable to Proto-Algonquian (Rhodes and Costa, 2003:181-3). Only a non-independent form of /ngodw-/ is acknowledged, from Proto-Algonquian *_nekwetwi_, while only an independent form of *bezhig* is acknowledged, from Proto-Algonquian *_peešekwi._ However, *bezhig* has both an independent form and a non-independent form /bezhigw-/ because it shows the same morphological and phonological behavior as /ngodw-/. Namely, classifiers are suffixed to it, causing the glide /w/ and linking vowels to surface. In fact, (29a) above is unacceptable without the glide and linking vowel, e.g. *_bezhig-mnag_. The independent form *bezhig* is used for count nouns, without a classifier (30).

(30) **Bezhig** kosmaan n-wii-giishnad-oon.

one melon.IN 1-FUT-buy. VTI2-1>0.SG

'I will buy one melon.' [Kimewon, n.d.]

Baraga (1878:309-14) provides an early description of numeral classifiers, of course without the modern labels. On mensural classifiers, sans the label, he writes (1878:309),

> The Cardinal numbers from *one* to *ten* undergo a little change before substantives signifying *measure*, of time or of other things; and these substantives always remain in the *singular* number. Instead of *bejig* [*bezhig*], *nij* [*niizh*], *nisswi* [*niswi*], etc., we say before those substantives: *ningô* [*ningo*], *nîjo* [*niizho*], *nissǫ* [*niswo*], ...[7]

[7] For ease of reading, I have included the updated spelling of Ojibwe numerals in brackets alongside Baraga's spelling, e.g. *bejig* is Baraga's spelling for 'one' and [*bezhig*] is the modern spelling.

Here, ‘substantives’ refers to mensural classifiers, and he accurately states that they have the semantics of measurement, use the numeral root form /ngodw-/, trigger the glide plus linking vowel on numerals (the ‘little change’), and lack plural forms.[8] A few pages later, Baraga (1878:311) also gives a description of sortal classifiers, sans the label, writing,

> When the substantive following the Cardinal number, from one to nineteen, signifies objects of *wood, stone, metal*, etc. or when *days* are mentioned, the cardinal number is connected *with certain syllables* alluding to the material, or shape, of the object expressed by the substantive…

This is where there are some inaccuracies, for although he describes well the differing semantics of mensural and sortal classifiers, he does not notice that each occurs with different forms of ‘one’. The distinction is evident in his examples, showing that it is not a modern innovation, e.g. *bezhigweg waabooyaan* ‘one (2D, flexible) blanket’ (Baraga, 1878:311) and *bezhigwaatig nabagisag* ‘one (1D rigid) board’ (Baraga, 1878:312). As for which classifiers are mensural and which are sortal, Baraga follows a different logic. Based on the examples he provides following the two descriptions, he seems to consider measurements of time and yards as mensural, but all other measurements, e.g. pair, boatload, bagful, foot, inch, etc. are categorized with the sortal classifiers.

Valentine (2000:883) also does not note the distinction in the numeral form of ‘one’, as he lists /aatig/, /eg/, /aabik/ and /aabiig/ with both numeral forms in a table. Given that the constraints on each numeral form are not phonological, this seems an attempt at thoroughness, where free variation was assumed. The differing use of /ngodw-/ for mensural classifiers and

[8] Measurements of time do not function as numeral classifiers. This is addressed in detail under section 3.5.1.

/bezhigw-/ for sortal classifiers is a previously unidentified distinction between these two types of numeral classifiers, which coincides with typological expectations.

One other difference worth noting concerns the optionality of numeral classifiers. Mensural classifiers are widely used and do not seem to be optional, especially in counting quantities of mass nouns. Sortal classifiers, on the other hand, are optional and used less frequently.[9] They were obtained only through elicitation, not freely produced by speakers. The numeral without the sortal classifier was supplied first. Neither speaker found any discernible difference between constructions with or without sortal classifiers. For example, 'one blanket' could be said *bezhigweg waabooyaan* or *bezhig waabooyaan* without a change in meaning. This asymmetry in optionality and frequency of use is also expected from a typological perspective, since all languages have measure terms, but not all have sortal classifiers (Grinevald, 2000:58).

### 3.5 Non-classifier morphemes in numerals

In the following sections, I discuss certain bound morphemes that share semantic or morphosyntactic characteristics with numeral classifiers, but are not numeral classifiers proper. I first cover measurements of time and land, which are similar to mensural classifiers, and then the bound morpheme /aabik/, which functioned in the recent past as a sortal classifier, but does not currently.

#### 3.5.1 Measurements of time and land

Both Baraga (1878:309, 311) and Valentine (2001:883-7) mention measurements of time, e.g. days, months, in their discussions of numeral classifiers. It is true that measurements of time

[9] Valentine (2000:502) also notes that the use of some numeral classifiers has diminished.

share several characteristics with numeral classifiers; they semantically represent measurements, are suffixed to numerals and lack number marking. However, they are unlike classifiers, crucially, in that they cannot co-occur with nouns. They are therefore excluded from the label of numeral classifier, as is the measurement for acre. A more appropriate label for these morphemes is 'measure term'. The forms for measurements of time and land are shown in bold, suffixed to the numeral root /ngodw-/ 'one' in Table 4.[10]

Table 4. Non-classifier measurements of time and land

| Example | Translation |
|---|---|
| ngo-**diba'igaans** | one minute |
| ngo-**diba'giiswan**, ngo-**diba'igan** | one hour |
| ngo-**giizhig** | one day, sky |
| ngo-**anamegiizhik** | one week |
| ngo-**giizis** | one month, moon |
| ngo-**biboon**, ngo-**boon** | one year, winter |
| ngo-**kiins** | one acre |

These measure terms cannot be used with *bezhig* in its free or bound forms, as illustrated in (31-32), unless a non-measurement meaning exists and is intended, as with *bezhig diba'giiswan*, meaning 'one clock' instead of 'one hour.' Notice that, like numeral classifiers, they also do not have plural forms (33).

[10] It seems /giizhig/ is used for counting a single day, and for any higher amount, /gon/ is used, e.g. *niizhogon* 'two days', *nisogon* 'three days', etc. The morpheme /gon/ comes from the independent noun *goon* 'snow', similar to how years are measured by winters (Valentine, 2001:371).

(31) a. ngo-diba'igaans 'one minute'

b. *bezhigwa-diba'igaans

(32) a. ngo-diba'giiswan 'one hour'

b. *bezhig diba'giiswan (means 'one clock')

(33) a. niso-giizhig 'three days'

b. *niso-giizhig-**oog** int. 'three days'

These morphemes are unlike mensural classifiers, however, in that they do not co-occur with nouns (34-35). The inability of these measure terms to co-occur with nouns may be explained by the use of verbs in Ojibwe for expressions that, in English, require a noun, as shown in (34b) (Valentine, 2001:130), or on semantic grounds. For example, in (35), the full meaning is contained within the measure term. The measure term is not denoting a property of the noun, it is itself supplying all the necessary semantic information. To say **ngo-kiins kii* is too repetitive because the meaning of 'land' is already expressed by the morpheme attached to the numeral. It is not even plausible to say **ngo-kiins naakaniigin* int. 'one acre of flooring' because that is incompatible with the very specific semantics of /*-kiins*/.

(34) a. *niizho-biboon nokiiwin int. 'two years of work'

b. niizho-biboon gii-anokii 'he has worked two years'

[Baraga, 1878:309, accepted by speakers]

(35) a. *ngo-kiins kii int. 'one acre of land'

b. *ngo-kiins naakaniigin int. 'one acre of flooring' (e.g. in a giant's mansion)

### 3.5.2 Change in numeral classifier status of /aabik/

Another morpheme excluded from the numeral classifier label is the former sortal classifier /-aabik/ ‘mineral’. It was used with nouns composed of materials such as metal, glass or stone, but has become lexicalized with the meaning ‘dollar.’ This is illustrated in (36), which shows the sortal classifier being used with overt nouns. These examples are from Baraga’s (1878:312) grammar and reflect an earlier stage in the language.

(36) a. bezhigw-**aabik** zhooniyaa ‘one dollar’

b. midaasw-**aabik** waasechiganaabikoon ‘ten windowpanes’

c. nisw-**aabik** gizhaabikiziganan ‘three stoves’

d. naanw-**aabik** zhiigwanaabikoog ‘five grindstones’

Valentine (2001:883) writes, “Nowadays the most commonly used classifier is /-aabik/, used in counting money.”[11] It is still used with /bezhigw-/, like sortal classifiers, and it is incompatible with the root form /ngodw-/ (37), which we might expect if it were reanalyzed as a mensural classifier, e.g. for the noun *zhooniyaa* ‘money’. Notice that /-aabik/ is still uninflected for number (38).

(37) a. bezhigw-aabik
one-dollar.IN
‘one dollar’

b. *ngodw-aabik
int. ‘one dollar’

[11] Valentine (2001:499) also notes that /aabik/ has become specialized in certain uses to refer to money.

(38) niizhw-aabik

two-dollar.IN

‘two dollars’

It seems it no longer functions as a numeral classifier for some speakers. This is illustrated by speakers’ rejection of its use with a long list of semantically compatible nouns, e.g. nouns for kettle, doorknob, windowpane glass, glass dish, rock, buckle, stove (39). One speaker even commented for the last noun, “It sounds like there’s a dollar on the stove.”

(39) a. *bezhigw-aabik kik

one-mineral.CL kettle.IN

int. ‘one (metal) kettle’

b. *bezhigw-aabik zgin’gan

one-mineral.CL doorknob.IN

int. ‘one (metal) doorknob’

c. *bezhigw-aabik waasechiganaabik

one-mineral.CL windowpane.IN

int. ‘one (glass) windowpane’

d. *niizhw-aabik naagaan-an

two-mineral.CL dish.IN-IN.PL

int. ‘two (glass) dishes’

e. *bezhigw-aabik aazhbik

one-mineral.CL rock.IN

int. ‘one (stone) rock’

f. *bezhigw-aabik zgibjigan

one-mineral.CL buckle.IN

int. ‘one (metal) buckle’

g. *bezhigw-aabik gizhaabikizigan

one-mineral.CL stove.IN

int. ‘one (metal) stove’

Perhaps the best evidence in favor of lexicalization is that dollars are most often made of paper and do not match the ‘mineral’ semantics of the classifier. While coin dollars are not impossible to come by, they are certainly not the norm in the States, where the speakers I worked with resided for many decades (see also Valentine, 2000:411). A narrowing of semantics may be indicative of the fading of a classifier system (Grinevald, 2000:85). While this may be true for /aabik/ as a sortal classifier, it still functions as a classifier in verbs.

In this chapter, I have shared a typologically informed and current description of mensural and sortal numeral classifiers in Ojibwe, including updated inventories and semantics. I identified a previously unnoticed distinction between the mensural and sortal types of numeral classifiers, that they occur with distinct root forms of the numeral ‘one.’ It was shown that measurements of time and land, as well as the morpheme /aabik/ which recently functioned as a sortal classifier, are to be excluded from the category of current numeral classifiers, for although they share semantic and some morphosyntactic properties with classifiers, their semantics are too narrow and they do not co-occur with nouns. The next chapter discusses classifiers as they occur in verbs.

# CHAPTER 4

# VERBAL CLASSIFIERS

## 4.1 Introduction to verbal classifiers

Ojibwe has both numeral and verbal classifiers, making it a 'multiple classifier' language (Aikhenvald, 2000:205). Verbal classifiers occur in verbs and categorize a property of the referent of one of its arguments, usually the subject of an intransitive (40) or the object of a transitive (41, 42) (Denny, 1978). The following examples show verbal classifiers co-occurring with overt nouns.

(40) a. Dk-**aagm**-isin **nbiish**.
cold-liquid.CL-VII.IN.SG water.IN.SG
'The water is cold.'

b. Dk-**aagm**-isin **nboob**.
cold-liquid.CL-VII.IN.SG soup.IN.SG
'The soup has gone cold.'

(41) 150 degrees piit-**aabk**-ibdoon **gzhaabkizgan**…
150 degrees to.a.certain.degree-mineral.CL-VTI.2.SG>0.SG stove.IN.SG
'Set the stove to 150 degrees…' [Valentine, 2001:898]

(42) Miinawaa aw akwe

also DEM.AN.SG woman.AN.SG

o-gii-dazhw-**eg**-isidoon **adoopowin-iig-aans**.

3-PST-spread.flat-2D.CL-3.SG>0.SG table-cloth-DIM.IN.SG

'The woman spread out a little tablecloth.' [Bloomfield and Nichols, 1991:108]

As will be discussed below, some verbs contain classifiers referring to non-argument relations, e.g. locatives (59, 62). Classifiers may appear in various kinds of verbs, including verbs of counting (Valentine, 2001: 883-6), attributive verbs (Valentine, 2001: 342-7), verbs of physical location and motion (Valentine, 2001: 347-8), goal focus verbs (Valentine, 2001: 349-54), causatives (Valentine, 2000: 433-42) and benefactives (Valentine, 2000: 463-5). An inventory of verbal classifiers is provided in Table 5.

Table 5. Inventory of verbal classifiers

| **Classifier** | **Translation** |
|---|---|
| /aakw/ | '1D, rigid' |
| /aabiig/ | '1D, flexible' |
| /eg/ | '2D, flexible' |
| /minag/ | '3D, small, round' |
| /aabik/ | 'mineral' |
| /aagam/ | 'liquid' |
| /isag/ | 'worked wood' |
| /tigwe/ | 'river' |

### 4.2 Verb structure and classificatory verbal affixes

It is necessary to clarify which type of verbal classifiers are found most commonly in Ojibwe, as they have been mislabeled in some literature. Aikhenvald (2000:149-171) distinguishes three types of verbal classifiers: classificatory noun incorporation, classificatory verbal affixes and suppletive classificatory verbs. Verbal classifiers in Ojibwe are erroneously labeled as suppletive classificatory verbs based on Denny's (1979:106-7) discussion (Aikhenvald, 2000:154-5).

There are four main classes of verbs in Ojibwe based on grammatical gender and transitivity: animate intransitive (AI), inanimate intransitive (II), transitive animate (TA) and transitive inanimate (TI). They are represented by distinct verb finals and inflection. Verb finals carry semantic content and identify the part of speech as a verb. If a verb is intransitive, the verb class is determined by the gender of the subject. If the verb is transitive, it is determined by the gender of the object. A verb form containing a classifier in medial position may at first appear suppletive, but knowledge of the internal structure of verbs reveals that verbal classifiers in Ojibwe are more accurately labeled as classificatory verbal affixes for several reasons.

Most importantly, it is the choice of the classifying morpheme and not the verb root, i.e. the initial, that is determined by properties of the referent. This is illustrated with the verb roots /dakw-/ 'short' (43), /ginw-/ 'tall/long' (44), and /gizh-/ 'hot' (45), all of which may take a classifier with no suppletion.[1] Verb finals often come in pairs based on gender, although the VAI final /-izi/ 'have the attribute of being, be' has several VII counterparts, including /-aa/, /-an/ and /-ad/, according to Valentine (2001:342-7). It is worth noting that, at least for this group of verb

[1] These verbs also have animate counterparts with the same root and may occur with the same classifiers. The /w/ in combination with the /i/ in the VAI final /-izi/ undergoes a phonological change to /oo/, e.g. *dakoozi* 'AN is short' and *ginoozi* 'AN is tall/long.' The same VAI final /-izi/ is used in verbs with and without a classifier.

finals, the verb forms containing classifiers occur with the VII final /-ad/, while those without a classifier occur with /-aa/, excecpt a few forms in section 4.4 below which occur with /-aa/ with no discernible differencee. The TI verbs in (44) all occur with the same final.

(43) a. **dakw**-aa
short-be.VII
'(IN) is short'

b. **dakw**-aabik-ad
short-metal.CL-be.VII
'(IN) (something metal) is short'

c. **dakw**-eg-ad
short-2D.flexible.CL-be.VII
'(IN) (something cloth) is short'

d. **dakw**-aakw-ad
short-stick.CL-be.VII
'(IN) (something stick-like) is short'

(44) a. **ginw**-aa
long-be.VII
'(IN) is long'

b. **ginw**-aabik-ad
long-metal.CL-be.VII
'(IN) (something metal) is long'

c. **ginw**-eg-ad
long-2D.flexible.CL-be.VII
'(IN) (something cloth) is long'

d. **ginw**-aakw-ad
long-stick.CL-be.VII
'(IN) (something stick-like) is long'

(45) a. **gizh**-izan
hot-act.on.it.by.heat.VTI
'heat it'

b. **gizh**-aagam-izan
hot-liquid.CL-act.on.it.by.heat.VTI
'heat it (liquid)'

c. **gizh**-aabik-izan
hot-mineral.CL-act.on.it.by.heat.VTI
'heat it (mineral)'

As noted by Conathan (2004:23-4), the label of 'suppletive classificatory verbs' misses the fact that the classifying morphemes are (mostly) the same in numerals as in verbs.[2] Lastly, there are examples of actual suppletive classificatory verbs in Ojibwe (46). Rhodes (1981) notes that certain verbs of breaking are associated with specific classes of objects, e.g. the stem /bookw-/ is associated with stick-like objects, and /baashk-/ with three-dimensional objects.[3] This appears to be a unique innovation of Ojibwe within Algonquian languages (R. Rhodes, p.c, October 16, 2016). Examples, shown below, include VTI *bookbidoon* 'break X (of sticks)' and VTI *baashka'an* 'break open X with something (of something three-dimensional)'.[4] Note that these do not include any discernible classifiers.

(46) a. **book**-bid-oon

break-use.hands.on.it-VTI

'break it using the hands (of something one-dimensional, e.g. sticks)'

[Rhodes, 1981:52; Valentine: 2000:440]

b. **baashk**-a'-an

break.open-with.tool/medium-VTI

'break open X using something (of something three-dimensional)'

[Nichols and Nyholm, 1995:29; Valentine, 2000:443]

[2] There are some differences in inventory between verbal and numeral classifiers, though there is a great deal of overlap.
[3] See Rhodes (1981) for further examples of suppletive classificatory verbs of breaking.
[4] Valentine (2000:440) translates *bookbidoon* as 'break in two using the hands', but Rhodes (1981:52) notes that the additional meaning of 'in two' does not necessarily apply when used with inflexible, one-dimensional objects such as sticks.

### 4.3 Differences in inventories of numeral and verbal classifiers

Clarification of the inventory of verbal classifiers versus numeral classifiers is also necessary, as there are classifiers that occur in verbs, but not in numerals. Compare the disallowed numeral classifiers with the accepted verbal classifiers in (47-49).

(47) a. gnw-**aakw**-izi zhngwaak
be.long-1D.rigid.VAI pine.tree.AN
'be a long pine tree'

b. *bezhigw-**aak**
one-1D.rigid.CL
int. 'one (1D, rigid) object'

c. *ningow-**aak**
one-1D.rigid.CL
int. 'one (1D, rigid) object' (means 'one hundred')

(48) a. dak-**aagam**-ig mnwaagmik
be.cold-liquid.CL-VII pop.IN
'it is cold pop'

b. *bezhig-agaam
one-liquid.CL
int. 'one liquid object'

(49) a. gnoo-**sag**-aa naakaniigin

be.long-wooden.VII floor.IN

'it is a long floor'

b. *ngod-sag

one-wooden.CL

int. 'one (wooden) object' (ngodsagoons 'one thousand')

To summarize, /aakw/ is a verbal classifier corresponding to the numeral sortal classifier /aatig/, both meaning '1D, rigid'. The two verbal classifiers /aagam/ 'liquid' and /isag/ 'worked wood' do not occur as numeral classifiers, nor do they appear to have numeral classifier counterparts. Likewise, the verbal classifier /tigwe/ 'river', discussed further in section 4.5, does not occur as a numeral classifier. The status of /isag/ as a numeral classifier is discussed further in section 6.3.3. In the following section, I list some of the various kinds of verbs with which classifiers may occur.

### 4.4 Verb types occurring with classifiers

Classifiers may occur in verbs of counting, attributive verbs, verbs of physical location and motion, goal focus verbs, causatives and benefactives.[5] Data are presented mostly as verb stems with classifiers. It was noted above that the II verbs without a classifier occurred with the attributive verb final /-aa/, while those with a classifier occur with /-ad/. This generalization

[5] For considerations of space, I have not included examples of every kind of verb which classifiers may occur with. Others include benefactives, in which the subject carries out an action for the benefit of an animate object, usually a person (Valentine, 2000: 463-5), and causatives (Valentine, 2000: 433-42).

holds for most of the forms with classifiers presented below, but a few occur with /-aa/. The paired ANIMATE forms all occur with the attributive VAI final /-izi/.

Numeral roots may combine with intransitive verb finals to create classifier-specific verbs of counting, as shown with a mensural classifier in (50) (Valentine, 2001: 883-6). In each example, the stem is represented first with the VAI final /-izi/, followed by the stem with VII finals /-aa/, /-an/ or/-ad/. The finals contribute the meaning 'have the attribute of being X'. This also shows that verbal classifiers appear with nouns of either gender value. It appears that, when the forms of verbal and numeral classifiers do not match, the verbal classifier is used in verbs of counting, e.g. the verbal classifier /aakw/ is used instead of /aatig/ for one-dimensional and rigid objects (51).

(50) Classifier /doopwin/ 'tableful'

a. ngo**doopwin**'izi b. ngodoopwin'ad 'be one tableful (of objects)'

(51) Classifier /aakw/ '1D, rigid'

a. niizhw**aak**zi b. niizhw**aak**od 'be two pole-like (objects)'

In addition to verbs of counting, classifiers may be present in attributive verbs, which are the main mode of expressing adjectival concepts (Valentine, 2001: 342-7). These are first represented with the VAI final, followed by the VII final.

(52) Classifier /isag/ ‘wood, board’

| | | |
|---|---|---|
| a. bko**sg**izi | b. bko**sg**aa | ‘have a hump (of a board)’ |
| c. --- | d. zhki**sg**ad | ‘be damp (of firewood)’[6] |

(53) Classifier /minag/ ‘round, berry-like’

| | | |
|---|---|---|
| a. mgi**mnag**zi | b. mgi**mnag**ad | ‘be big (round obj.)’ |
| c. gaach**min’g**izi | d. gaach**min’g**ad | ‘be small (round obj.)’ |
| e. ziig**min’g**izi | f. ziig**min’g**aa | ‘be dried up/wrinkled (round obj.)’ |
| g. zhaash**min’g**izi | h. zhaash**min’g**ad | ‘be slippery (round obj.)’ |

(54) Classifier /aabiig/ ‘string-like’

| | | |
|---|---|---|
| a. dkw**aabiig**zi | b. dkw**aabiig**ad | ‘be short (string-like obj.)’ |
| c. gaach**aabiig**zi | d. gaach**aabiig**ad | ‘be small (string-like obj.)’ |
| e. gnw**aabiig**zi | f. gnw**aabiig**ad | ‘be long/tall (string-like obj.)’ |
| g. mskwiiw**aabiig**zi | h. mskwiiw**aabiig**ad | ‘be all bloody (string-like obj.)’ |

(55) Classifier /aabik/ ‘metal, stone-like’

| | | |
|---|---|---|
| a. bpag**aabk**izi | b. bpag**aabk**ad | ‘be light/thin (metal/stone-like obj.)’ |
| c. dkw**aabk**izi | d. dkw**aabk**ad | ‘be short (metal/stone-like obj.)’ |
| e. ngab**aabk**izi | f. ngab**aabk**ad | ‘be flat (metal/stone-like obj.)’ |
| g. zhaash**aabk**izi | h. zhaash**aabk**ad | ‘be slippery (metal/stone-like obj.)’ |

[6] This example is from Valentine (2001: 372), where he describes /-isagad/ ‘pertaining to wood’ as a VII final, though it seems more likely to be composed of the medial /-isag-/ and the VII final /-ad/.

(56) Classifier /aakw/ ‘wooden, stick-like, pole-like’[7]

| | | |
|---|---|---|
| a. mshkaw**aak**zi | b. mshkaw**aak**od | ‘be hard (wooden/pole-like obj.)’ |
| c. gnw**aak**zi | d. gnw**aak**od | ‘be long (wooden/pole-like obj.)’ |
| e. nw**aak**zi | f. nw**aak**od | ‘be long, be tall (of sticks) |
| g. zhaash**aak**zi | h. zhaash**aak**od | ‘be slippery (wooden/pole-like obj.)’ |

(57) Classifier /iig/, /eg/ ‘cloth, sheet-like’

| | | |
|---|---|---|
| a. gnw**eg**zi | b. gnw**eg**ad | ‘be long (sheet-like obj.)’ |
| c. nbiiw**eg**zi | d. nbiiw**eg**ad | ‘be wet, feel wet (of cloth)’ |
| e. gbook**iig**zi | f. gbook**iig**ad | ‘be damp (sheet-like obj.)’ |
| g. gpag**iig**zi | h. gpag**iig**ad | ‘be thick (sheet-like obj.)’ |

Verbs of physical location and motion may also occur with classifiers (Valentine, 2001:347-8). In these examples, the verb final /-se/ is the same for AI and II verbs and contributes the meaning ‘fall, move, change state’. Note that the classifier in (59) refers not to a subject or object argument, but a locative meaning.

(58) Classifier /minag/ ‘round, berry-like’

| | |
|---|---|
| a. gdag**min’g**ise | ‘roll over (of round obj.)’ |
| b. gtig**min’g**ise | ‘roll (of round obj.)’ |

(59) Classifier /aabik/ ‘metal, stone-like’

| | |
|---|---|
| zhaash**aabk**ise | ‘slip off (of metal/stone-like surface)’ |

[7] Valentine (2001:385) also notes that this classifier often co-occurs with incorporated body parts in attributive verbs, e.g. *ddaakw**aak**gaade* ‘have short legs’, where /dadaakw-/ is ‘short’ and /-gaad-/ is ‘leg’.

Classifiers may be present in goal focus verbs with instrumental causative finals (Valentine, 2001:349-54). In particular, classifiers are found with the VAI final /-shin/ and paired VII final /-sin/, meaning ‘fall, happen, lie, be situated’. These finals often indicate a resultant state. The classifier may signal the nature of the subject, as in (60-61), or the nature of the surface on which the action takes place, as in (62).

(60) Classifier /eg/ ‘cloth, sheet-like’

a. mnw**eg**shin b. mnw**eg**sin ‘be smooth/even (sheet-like obj.)’

(61) Classifier /aabiig/ ‘string-like’

a. zaagd**aabii**shin b. zaagd**aabii**sin ‘come out (string-like obj.)’

(62) Classifier /aabik/ ‘metal, stone-like’

a. zhaash**aabk**ishin b. zhaash**aabk**isin ‘slip/slide and fall on (metal/stone obj.)’

### 4.5 Non-classifier morphemes in verbs: Noun incorporation

Noun incorporation takes the goal of a transitive verb and integrates it into the verb itself, which then becomes intransitive (Valentine, 2001:409-11, 696-8; see also Mithun, 1986). Valentine (2001:409-11) labels verbs that commonly show incorporation ‘incorporated goal verbs’, and writes that many involve the “quest for, acquisition, transport, and processing of material resources such as fish, game, and plants and their parts, or with the acquisition, donning, doffing, or wearing of articles of clothing” (2001:697). Incorporation differs from verbal classifiers in that the resultant verb cannot co-occur with an overt noun corresponding to that which is incorporated. In Ojibwe, the noun is incorporated into the medial position, between the verb

initial and verb final (Valentine, 2001:330).[8] The following are canonical examples of noun incorporation, resulting in Animate Intransitive verbs.

(63) a. moonha**pnii** 'pick/dig potatoes'[9] Noun: *piny* 'potato'

b. naaj**miijm**e 'fetch food' Noun: *miijim* 'food'

c. gezbi**naagn**e 'clear the dishes' Noun: *naagan* 'dish'

d. naad**zhoon'yaa**we 'go get one's money' Noun: *zhooniyaa* 'money'

e. bbanda**bzhikiiw**e 'go about looking for cows' Noun: *bizhikiw* 'cow'

[Valentine, 2001:409-11]

Incorporation is easiest to recognize when it is independent nouns that are incorporated, but Valentine (2001:332, 411-12) and Biedny et al. (forthcoming) note that the line between incorporation and verbal classifiers is blurred by some bound morphemes that do not correspond to independent nouns. Body part nouns (Valentine, 2001:106-9, 385-94), which are overwhelmingly dependent nouns, i.e. they are obligatorily possessed and bound, as well as bound morphemes carrying semantics of environmental features (Valentine, 2001:365-71), e.g. /adin/ 'hill' or /gam/ 'water', are two categories of bound morphemes that, when in verbs, may be labeled or at least closely resemble, noun incorporation.[10]

[8] This may differ from other derivational processes where the independent noun serves as an initial to which verb finals are added, e.g. verbs of possession (Valentine, 2001:416) or verbs of constructive application (Valentine, 2001: 418-19).

[9] The consonant /y/ in combination with the VAI final /e/ surfaces as /ii/ (Valentine, 2001331, 410).

[10] Like body part dependent nouns, kinship terms are also obligatorily possessed dependent nouns (Valentine, 2001:107-14). They occur in verbs, but do so in the initial position (Valentine, 2001:710), rather than the medial position where incorporation takes place. They are not discussed as potential noun incorporation.

Indeed, it was shown earlier that several body part terms serve as numeral classifiers when denoting measurements, e.g. /ninjy/ ‘hand, finger’ is the mensural classifier for ‘handful’ and /zid/ ‘foot’ is the classifier for measurements of distance by the foot. Further, body part terms may have incorporated forms which do not match their obligatorily possessed forms (Valentine, 2001:386), e.g. /-kaad/ ‘leg’ is the possessed form, while /gaad/ ‘leg’ is the incorporated form. Many verbs that may show incorporation feature an abstract VAI final /e/, sometimes called ‘incorporating *e*’ (Biedny, et al., forthcoming), but this is not a clear diagnostic for incorporation.

Valentine gives examples with /aabik/ ‘mineral’ where the morpheme is not highlighting the mineral material of the noun, but adding the more specific semantics of money (64). The lexicalization of /aabik/ to refer to money, then, is not isolated to its numeral classifier form. (64a) can be compared to (63d) above, which has the independent noun *zhooniyaa* ‘money’ incorporated with the same verb initial and final and identical meaning. Other examples are provided featuring /konay/ ‘clothing’ (65), which does not correspond to any independent noun, and /is/ ‘firewood’ (66), which is related to the classifier /isag/ ‘worked wood’.[11] Valentine (2001:411-12) calls these ‘special (lexicalized) medials’.[12]

(64) a. naad**aabk**we ‘go get one’s money’

b. gind**aabk**we ‘count one’s money’

c. maawndow**aabk**we ‘collect money, pool money’

[11] The independent noun for clothing at Wikwemikong is given as *gwiwin* (Valentine, 2001:412). The independent noun for firewood is formed from the generalized possessor prefix /m-/ + /is/ + /i/ inanimate marker, resulting in the singular forms *mshi* or *msan* (Valentine, 2001:411).
[12] Some forms feature a /w/ following the incorporated bound morpheme, which is an abstract nominalizing final (Valentine, 2001:365).

(65) a. biis**kon'y**e ‘put on clothes’

b. giis**kon'y**e ‘take off clothes’

c. msko-**kon'y**e ‘wear red clothes’

(66) a. mn**is**e ‘chop firewood, cut firewood’

b. bgidn**is**e ‘put wood in the fire’

Classifiers and incorporated body parts may co-occur in the same verb, with the classifier /aak/ preceding the incorporated body part /gaad/ ‘leg’, shown first with the Animate Intransitive verb, then the Inanimate Intransitive (67). In (68), the classifier /minag/ ‘small, round’, which seems to occur twice in the word, co-occurs with the body part morpheme /jii/ ‘belly’.[13]

(67) a. ggaanw**aakgaad**e b. ggaanw**aakgaad**eyaa ‘have long legs’

[Valentine, 2001:344]

(68) **mng**-i-**jii**-**mnag**-zi

small.round-linking.vowel-belly-small.round-be.VAI

‘be fat, have a paunch’ [Valentine, 2001:389]

While the non-classifier status of body part medials seems incontrovertible, many questions remain surrounding the applicability of the label of verbal classifier to other bound morphemes, particularly those commonly termed ‘environmental medials.’ One such environmental medial /gam/, combines with a pre-medial /aa/ found in many classifiers, to form

[13] Valentine (2001:473-4) briefly discusses the medial /jii/ as a possible classifier of round shape, saying it used to mean ‘belly’. Further data is needed to determine whether it occurs with overt nouns.

/aagam/ ‘liquid’, which has been unequivocally shown to serve as a verbal classifier, co-occurring with overt nouns. The situation is less clear for other environmental medials, e.g. /aagonag/ ‘snow’, which shows pre- and post-medial elements similar to verbal classifiers, but may not occur with overt nouns. Valentine (2001:365) says that impersonal verbs describing features of landscape and weather do not usually have an explicit subject or participial forms, as shown in (68), but elsewhere, Valentine (2001:254) hedges this by saying that impersonal verbs may sometimes occur with overt subjects, as in (70).

(69) *Shp-aagnag-aa maanda ki.
high-snow-be.VII DEM.IN.SG land.IN.SG
int. ‘This land is deep in snow.’

Unlike body part morphemes, we cannot exclude all environmental medials from the verbal classifier label. One environmental medial that is attested with an overt noun is /tigwe/ ‘river’. In the example below, the classifier /tigwe/ ‘river’ occurs in the verb *zhitgweyaa* ‘be a river running in a certain direction’ with the overt noun *ziibi* ‘river’.

(70) Mii dash gii-ni-maajaa-d
so then PST-away-set.off.VAI.CONJ-3.SG
ezh-**tigwe**-yaa-g **iw** **ziibi**.
towards.a.certain.place.IC-river.CL-be.VII-CONJ.0 DEM.IN.SG river.IN
'Then he went off in the direction in which that river flowed.'

[Valentine, 2001:255]

There are likely other environmental medials that are verbal classifiers and may occur with overt nouns. The topic of noun incorporation as it relates to verbal classifiers requires further research, both from a diachronic perspective, tracing their origins and changes, and from a synchronic perspective, working with speakers to tease out their various functions. So far, it has been shown that there are clearly numeral and verbal classifiers in Ojibwe. What is less obvious is the status of these classifying morphemes when they occur in the domain of the noun. In the following chapter, I review some arguments for and against the analysis of noun classifiers in Ojibwe.

# CHAPTER 5

# STATUS OF CLASSIFYING MORPHEMES IN NOUNS

## 5.1 Introduction to classifying morphemes in nouns

In Ojibwe, certain morphemes are said to have a classifying function (Baraga, 1878:311-4; Valentine, 2001:572, 883-4), i.e. they denote a specific property of a referent. Many of these classifying morphemes occur in multiple environments. In the following examples, the classifying morphemes, /aabik/ 'mineral' and /eg/ '2D', are shown to occur in numerals (71), verbs (72) and nouns (73).

(71) a. ningodw-**aabik**
one-**mineral**
'one metal/glass/stone (object)'

b. ningodw-**eg**
one-**2D**
'one long and wide (object)'

(72) a. ginw-**aabik**-ad
long-**mineral**-be.VII
'IN (metal/stone/glass object) is long'

b. ginw-**eg**-ad
long-**2D**-be.VII
'IN (2D) is long'

(73) a. waasechigan-**aabik**
window-**mineral**
'windowpane'

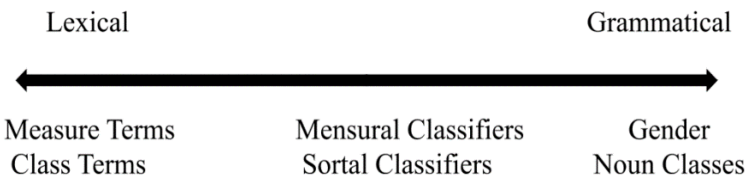
b. waasechigan-**iig**-in
window-**cloth**-NOM
'curtain'

Having a 'classifying function' is not synonymous with being a classifier, however. While these morphemes fit the semantic profile of classifiers, that alone does not qualify them as classifiers in every syntactic environment; classifiers also have distinguishing grammatical

characteristics. It has been shown that the classifying morphemes in numerals and verbs straightforwardly fit the current, cross-linguistic definitions for numeral and verbal classifiers, respectively. The status of these morphemes is not so clear when they occur in nouns, however. I explore three potential labels for classifying morphemes in nouns, including noun classifiers, class terms and lexical morphemes, and conclude that the final label of 'lexical morpheme' is most accurate.

Grinevald (2000:61-2; 2002:260-1) situates several systems of noun categorization on a lexical-grammatical continuum, where 'lexical' means both a part of the lexicon and semantically compositional, and 'grammatical' means part of the morphosyntax of a language. Gender/noun class systems are on the grammatical end of the scale, classifiers are at the mid point and measure/class terms are at the lexical end.

Figure 5. Lexico-grammatical scale of noun categorization systems




This conceptualization captures the shared function across noun categorization systems and supports a gradient, rather than categorical, approach to distinguishing between them. It should be noted that while grammaticalization is often taken to be inversely related to semantic motivation, this is not necessary and the two should be considered as separate parameters (see Lucy, 2000: 335-8; Grinevald, 2015 for further discussion). As seen in (73), the same classifying morphemes found in numerals and verbs may also occur in nouns, illustrated with further examples below.

(74) a. waasechgan-**iig**in b. waasechgan-**aabik**

window-cloth window-glass

'curtain' 'windowpane'

(75) kikw-**aabik**

kettle-**mineral**

'tin can' [Valentine, 2000:499]

(76) ookwe-**min**

maggot-**berry**

'black cherry'

(77) nabag-**isag**-o-jiimaan

flat-**wood**-LINKING.VOWEL-boat

'wooden boat'

(78) mazin-**aabik**-iwebin-igan

figured.image-**mineral**-fling.by.hand-NOM

'typewriter, computer' [Ojibwe People's Dictionary]

In contrast to numeral and verbal classifiers, the label of noun classifier is not obviously applicable to these morphemes in nouns for both morphological and semantic reasons.

## 5.2 Noun classifiers

Noun classifiers occur within the noun phrase, either as free or bound morphemes, usually derived from independent nouns (Grinevald, 2000; Aikhenvald, 2000:91). They are distinguished from other types of classifiers in that they occur independently of operations such as quantification or possession (Grinevald, 2000:64). Their selection is dependent on semantics; the same noun may be used with different classifiers to effect a change in meaning, as shown below (79-80).

(79) a. batang limau
tree.CL lemon
'lemon tree'

b. buah limau
fruit.CL lemon
'lemon fruit'

[Minangkabau, Marnita, 1996 as cited in Aikhenvald, 2000:84]

(80) a. nanthi kamarl
generic.CL eye
'eye/face'

b. kura kamarl
aquatic.CL eye
'water hole'

c. kardu kamarl
human.CL eye
'sweetheart'

d. mi kamarl
vegetable.CL eye
'seed'

[Murrinhpatha, Walsh, 1997:275 as cited in Aikhenvald, 2000:84]

Noun classifiers may serve other functions, as discussed in 1.1, but no one of these seems to be required (Aikhenvald, 2000:81). They have been most thoroughly documented in Australian (Dixon, 1982) and Mesoamerican languages (Craig, 1986; 1992; Grinevald, 2000;

2002), but are a relatively newly established classifier type (Aikhenvald, 2000:11). Documented cases are still scarce (Grinevald, 2000:65). Compounding the difficulty of their identification is the fact that noun classifiers differ in the size of their inventory and their degree of grammaticalization (Aikhenvald, 2000:84). They are distinguished from more lexical class terms, also called class nouns, which are discussed next.

### 5.3 Class terms

Class terms are derivational components that function as the head of compounds which are exemplars of the category labeled by the class term (Haas, 1964; DeLancey, 1986:438). They may be semantically akin to noun classifiers, but are limited to a few semantic fields, such as flora and fauna. Grinevald (2000:59-60) gives the following examples of English *-berry* and *tree*.

(81) a. straw**berry**, blue**berry**, rasp**berry**, boysen**berry**, goose**berry**, marion**berry**

b. apple **tree**, banana **tree**, orange **tree**, cherry **tree**, olive **tree**, palm **tree**

It is unsatisfying to label English as having noun classifiers on the basis of such scant data; indeed, Grinevald (2000:59) says class terms are usually limited to 'a few illustrative examples'. Another common semantic field is that of occupations, using class terms such as 'man', 'woman' or the gender-neutral 'person' or 'member.'

(82) a. milk**man**, clergy**man**, chair**man**

b. business **woman**, cleaning **woman**, chair**woman**

c. spokes**person**, sales**person**, band **member**, service**member**

Similar class terms may be found in Ojibwe with compounds formed using *inini* ‘man’ and *ikwe* ‘woman’ (83). These are called *compound sets* by Valentine (2000:521-2).

(83) a. mandaag**nini** ‘gentleman’

b. mandaag**kwe** ‘lady’

There is not always a clear disconnect between class terms and noun classifiers. Class terms may occur in languages both with and without classifiers and they have at times been mislabeled as classifiers (Grinevald, 2000:62). Classifiers in the Tai language family developed from the more lexical class terms, and both types of nominal classification currently coexist (DeLancey, 1986). Class terms are described as being halfway between classifiers and nouns based on their syntactic and semantic behavior (DeLancey, 1986:438-440).[1] Further complicating the distinction between noun classifiers and class terms is the fact that, like classifiers, class terms may occasionally be omitted with no change in meaning, as in (84).

| (84) | a. duaŋ-taa | b. taa | |
|---|---|---|---|
| | round/light.source.CT-eye | eye | |
| | ‘eye’ | ‘eye’ | [Thai, DeLancey, 1986:441] |

Our next potential label for classifying morphemes in nouns is that of lexical morphemes. They are so far to the lexical end of this continuum that they do not appear on it, since their semantic and syntactic principles of organization are too broad to allow any useful characterization.

[1] In Thai, class terms may be distinguished from classifiers based on the word order Class term-Noun classifier-Numeral. The same strategy is possible in Nung with the order Numeral classifier-Class term-Noun (DeLancey, 1986:442-3).

## 5.4 Lexical morphemes

Lexical morphemes, also called content morphemes, are free or bound morphemes which have concrete, semantic content. In languages with lower morpheme-per-word ratios, such as English, many lexical morphemes are free, but in polysynthetic languages like Ojibwe, the same lexical concepts may be represented as bound morphemes. For illustration, several concrete noun finals from Ojibwe are given in (85), along with their counterpart free morpheme English translations.

(85) a. /-gamigw/ 'building, habitation'
(e.g. *aakoziiwigamig* 'hospital', *odaabaniiwigamig* 'garage')
b. /-aboo/ 'liquid'
(e.g. *mandaaminaaboo* 'corn soup', *giziibiiginaaganewaaboo* 'liquid detergent')

In the next section, I compare these three labels of noun classifier, class term and lexical morpheme to determine how best to characterize such classifying morphemes in Ojibwe.

## 5.5 Comparison of noun classifiers, class terms and lexical morphemes

To distinguish class terms from true noun classifiers, Grinevald (2000) suggests identifying whether the language has other types of classifiers in addition to noun classifiers, and whether the forms potentially identified as noun classifiers are identical in those other classifier types. Following this line of reasoning, Ojibwe may have noun classifiers. The same morphemes used for numeral and verbal classifiers may be found in nouns. Further, Grinevald considers noun classifiers to be the most open class of the different classifier types. There appear to be many more morphemes that might be analyzed as noun classifiers than numeral or verbal ones in

Ojibwe. Possible noun classifiers that do not appear to be used with numerals and verbs include /-ikomaan/ ‘knife’ and /-naagan/ ‘dish’, among others.

Crucially, however, in all languages attested to have noun classifiers, the noun classifier is a *free* morpheme, not a bound one (Grinevald, 2000:64), as is the case in Ojibwe. Further, the relationship between the noun classifier and the noun is usually one of generic-specific, where the classifier signals a more general category of which the noun is a member. This sort of semantic relationship is absent in the Ojibwe examples. The description of noun classifiers does not seem to fit the use of classifying morphemes in Ojibwe nouns, so we move on to the next potential label of class terms.

The first column of Table 6 lists several diagnostics for comparison of the behavior of Ojibwe classifying morphemes in nouns to both lexical morphemes and class terms. The last column identifies which label best matches the given characteristic in Ojibwe.

Table 6. Comparison Ojibwe classifying morphemes with class terms and lexical morphemes

| **Characteristic** | **Ojibwe** | **Lexical morpheme** | **Class term** | **Match** |
|---|---|---|---|---|
| free morpheme | - | -/✓ | -/✓ | LM/CT |
| obligatory | ✓ | ✓ | - | LM |
| large inventory | ✓ | ✓ | - | LM |
| head of noun | -/✓ | - | ✓ | LM/CT |

In Ojibwe, the classifying morphemes in nouns are bound, obligatory, cover a large semantic inventory and do not always necessarily serve as the head of the noun. Recall that class terms serve as heads of the compound nouns that they occur in. Classifying morphemes sometimes serve as the head of the noun of which they are part (86), but not always (87). *Nabagisagojiimaan* 'wooden boat' is a type of boat, not a type of wood; likewise, *kikwaabik* 'tin can' is a type of (metal) container, not a type of mineral.

(86) a. waasechgan-**iig-**in
window-**cloth-**NOM
'curtain'

b. waasechgan-**aabik**
window-**glass**
'windowpane'

(87) a. nabag-**isag**-o-jiimaan
flat-**worked.wood**-linking.vowel-boat
'wooden boat'

b. kikw-**aabik**
kettle-**mineral**
'tin can'

Obligatoriness and the size of the inventory of these classifying morphemes give the clearest indication that they are better labeled as lexical morphemes, rather than class terms. Dropping the classifying morpheme from any of these nouns leads to an entirely different noun referent, regardless of discourse contexts, e.g. *waasechgan* 'window' or *kik* 'kettle'. Valentine (2001:484-501) provides a rather wide-ranging sample of noun finals with classifying semantics, e.g. /-aaboo/ 'liquid', /-gamigw/ 'building, habitation', /-amegw/ 'fish'.

In conclusion, it appears that 'lexical morpheme', or the commonly used 'classifying morpheme', is the most appropriate label for morphemes occurring in Ojibwe nouns that serve as classifiers proper in numerals and verbs. However, care should be taken in the description to avoid confusion with noun classifiers by language teachers, learners and linguists alike.

It has been shown that Ojibwe has both numeral and verbal classifiers. Numeral classifiers occur suffixed to numerals, and maybe either mensural or sortal. Mensural and sortal classifiers are distinguishable based on the numeral root form of ‘one’ with which they occur. Measurements of time and land, and the former sortal classifier /aabik/ are excluded from the numeral classifier label. Many of the same morphemes occur as verbal classifiers, though the inventories are not identical, and there are several more verbal classifiers than numeral ones. Verbal classifiers occur as classificatory verbal affixes, rather than forming suppletive classificatory verbs. These are distinct from the related phenomenon of noun incorporation, which is incompatible with overt nouns, though some morphemes seem to blur the distinction between verbal classifiers and incorporation. The next chapter describes the semantics of the grammatical gender system in Ojibwe and connects it with that of the classifiers.

# CHAPTER 6

# GENDER

## 6.1 Introduction to gender in Ojibwe

Outside of the Algonquian family, animacy refers to a hierarchy that interacts with grammar such that certain distinctions, e.g. number or case marking, will apply to nouns only down to a certain level in the hierarchy (Silverstein, 1976; Comrie, 1989). Dahl (2000) offers the example of direct objects being more likely to be marked for case if they have a high degree of animacy. Likewise, in Mundari, a Munda language of the Austroasiatic family, verbs and demonstratives mark number only for nouns denoting animates (Bhattacharya, 1976:191-2; Corbett, 1991:31).[1] In Tlapanec, an Oto-Manguean language, animacy plays a role in word order. Given that subjects of transitives are always animate, a clause with an animate object is VSO or SVO, but one with an inanimate object is VOS (Suárez, 1983:97-8, as cited in Corbett, 1991:31). While this animacy hierarchy is present in Algonquian languages (Wiltschko & Ritter, 2015), the role of animacy in the grammar is even more pervasive as it has been identified as forming the semantic core of the grammatical gender system. As defined in 2.2, grammatical gender requires agreement, i.e. covariation in associated elements outside the noun (Hockett, 1958:231; Corbett, 1991:4, 105) and every noun is assigned a gender value.

[1] Some sources cite the Austroasiatic Munda family of India and Bangladesh as possessing a bipartite grammatical gender system based on animacy (Bhattacharya, 1976; Aikhenvald, 2000:77). However, as discussed by Corbett (1991:31), if this were truly a grammatical gender system, we would expect to find verb and demonstrative forms marking number that covary for inanimates, as well, rather than all inanimates lacking the number feature altogether. This is better described as a semantic restriction on number agreement, and not grammatical gender.

The following section outlines the covariation that instantiates gender agreement in Ojibwe, followed by a discussion of gender marking (or lack thereof) on nouns. Then, gender assignment cross-linguistically is covered in detail before presentation of the analysis of assignment in Ojibwe.

### 6.1.1 Gender agreement

The targets for gender agreement in Ojibwe are verbs (Valentine, 2001:115-6, 130-5) and demonstrative pronouns (Valentine, 2001:115-6, 123-5, 546).[2] Table 7 shows three Ojibwe dialects of proximal demonstrative pronouns and Table 8 shows the corresponding distal demonstrative pronouns.[3] Demonstratives agree in gender and number, except for those that are both ANIMATE and obviative, which do not distinguish number. Obviative demonstratives are not represented in the tables, though their forms are identical to the INANIMATE plural forms. INANIMATE demonstratives are incompatible with obviation.[4]

Table 7. Proximal demonstrative pronouns Southwestern/Odawa 1/Odawa 2

| Gender | Singular | Plural |
|---|---|---|
| ANIMATE | wa'aw/maaba/aw | ongow/gonda/gow |
| INANIMATE | o'ow/maanda/ow | onow/nonda/now |

[2] Other kinds of pronouns distinguish gender, as well, including indefinite pronouns, dubitative pronouns, pronouns of kind, pausal pronouns and interrogative pronouns (Valentine, 2001:121-9), though they replace the noun rather than co-occur with it.

[3] Valentine (2001:124) says the first Odawa set is associated with speakers on Manitoulin Island, while the second is associated with speakers of other locales such as Sugar Island, Walpole Island and Birch Island. Speakers may use mixed sets, as well.

[4] Obviation is inflection used to differentiate between two third persons in a clause. The third person which is more central to the discourse, more familiar, larger, etc. is proximate and unmarked, while the other third person bears obviative inflection. It is also sometimes called fourth person, instead of obviative.

Table 8. Distal demonstrative pronouns Southwestern/Odawa 1/Odawa 2

| Gender | Singular | Plural |
|---|---|---|
| ANIMATE | a'aw/wa/aw | ingiw/giwi(g)/giw |
| INANIMATE | i'iw/wi/iw | iniw/niwi(n)/niw |

As discussed in 4.2, Ojibwe has four verb classes based on transitivity and grammatical gender: Inanimate Intransitive (VII), Animate Intransitive (VAI), Transitive Inanimate (VTI) and Transitive Animate (VTA). Verbs agree in gender with the subject for intransitives and the object for transitives.[5] The verb final and corresponding inflection varies to show agreement.

(88) INANIMATE demonstrative and VII agreement

**I'iw** adoopwin mangade-y-**aa**.

that.IN.SG table.IN.SG be.wide-epenthetic.consonant-VII.IN.SG

'That table is wide.'

(89) ANIMATE demonstrative and VAI agreement

**A'aw** zhigaag mangade-**zi**.

that.AN.SG skunk.AN.SG be.wide-VAI.AN.SG

'That skunk is wide.'

[5] It should be noted that the directional theme sign also differs between VTAs and VTIs, though it is obscured in this and many other examples. The VTA theme sign is /-aa/, as it appears above, but the VTI theme sign is underlyingly /-am/. The /m/ of the suffix deletes next to the final inflectional suffix /-n/, and the vowel shows compensatory lengthening (Valentine, 2201:306-7).

(90) INANIMATE demonstrative and VTI agreement

**I'iw** adoopwin ni-ganaw-**aaband**-aa-**n**.

that.IN.SG table.IN.SG 1-attend-look.at.VTI-DIR.1>0-SG

'I look at that table.'

(91) ANIMATE demonstrative and VTA agreement

**A'aw** zhigaag ni-ganaw-**aabam**-aa.

that.AN.SG skunk.AN.SG 1-attend-look.at.VTA-DIR.1>3

'I look at that skunk.'

### 6.1.2 Gender marking on nouns

Gender marking on nouns is considered separate from gender marking on other parts of speech because, as stated in 2.2, nouns are the controllers of agreement, while other parts of speech that show agreement are the targets. Gender marking on nouns is not a requirement for the establishment of grammatical gender in a language, and indeed, many nouns in languages with grammatical gender give no formal indication of the gender value on the noun itself. This distinction is labeled covert and overt gender (Corbett, 1991:62-3).

Covert gender is, of course, more relevant for systems with a high degree of semantic assignment, while overt gender is found, by definition, in gender systems with predominantly formal assignment. The gender value of a noun is determined by the agreements shown on its targets, regardless of whether assignment is semantic or predominantly formal. Even in languages with predominantly formal assignment, there may be instances where the gender value is unmarked on the noun, or the gender value marked on the noun is contrary to the gender value

shown by the agreements on its target(s). In the following Spanish examples (92), the MASCULINE noun, *día* 'day', shows the expected FEMININE /-a/ marking on the noun, while the FEMININE noun, *mano* 'hand', shows the expected MASCULINE /-o/ marking on the noun. Likewise, in the Swahili example (93), the noun shows the noun class prefix marker /ki-/ associated with noun classes 7/8, but it is actually of noun classes 1/2. These examples illustrate why the gender value of a noun must be posited based on the agreements shown on its targets, rather than the marking on the noun.

(92) a. **El** di**a** esta hermos-**o**.
the.M day.M is beautiful-M
'The day is beautiful.'

b. **La** man**o** esta hermos-**a.**
the.F hand.F is beautiful-F
'The hand is beautiful.'

(93) a. **Ki**boko **m**-kubwa **a**-meanguka.
hippopotamus 1-big 1-has.fallen.
'The big hippopotamus has fallen.'

b. *Kiboko ki-kubwa ki-meanguka.
hippopotamus 7-big 7-has.fallen. [Corbett, 1991:48]

In Ojibwe, singular nouns have covert gender, and plural nouns have overt gender. The form of the plural suffix varies based on the underlying phonological shape of the noun, though a general rule is that ANIMATE plural suffixes end in /-g/ and INANIMATE plural suffixes end in /-n/ (Valentine, 2001:115, 178-82).

(94) ANIMATE plural marker -(V)Vg

a. zhigaag ‘skunk’ b. zhigaagw-**ag** ‘skunks’

(95) INANIMATE plural marker -(V)Vn

a. adoopwin ‘table’ b. adoopwin-**an** ‘tables’

Proto-Algonquian is reconstructed as having gender markers on singular nouns, final vowels of /-a/ for ANIMATE nouns and /-i/ for INANIMATE nouns. A sound change resulted in the loss of these markers across the majority of Algonquian languages, Ojibwe included, though Meskwaki (Dahlstrom, 1995) and Miami (Costa, 2003:205-11) have retained them. The markers are still visible in Ojibwe on a handful of bisyllabic words, though they are no longer meaningful, especially as there are currently ANIMATE nouns ending in /-i/, e.g. *inini* ‘man, and (a few) INANIMATE nouns ending in /-a/, e.g. *oodena* ‘town’ (Valentine, 2001:177-8, 482).

(96) ANIMATE bisyllabic Ojibwe nouns retaining gender marking

a. *nik-**a*** ‘goose’ b. *makw-**a*** ‘bear’

(97) INANIMATE bisyllabic Ojibwe nouns retaining gender marking

a. *mish-**i*** ‘ firewood’ b. *miskw-**i*** ‘blood’

c. *ak-**i*** ‘land’ d. *abw-**i*** ‘paddle’

The presence of gender marking on plural nouns does not negate the label of semantic assignment, since they are derived forms. In other words, a speaker must know the gender of the noun to produce the correct plural. Now that we have an understanding of the morphosyntactic

expression of gender in Ojibwe, on both controllers and targets, the next section expounds on gender assignment in the language. Semantic assignment has been the topic of a rich and lively academic debate lasting for decades, and Ojibwe, having not only semantic assignment, but also non-sex-based semantic assignment, is positioned at its center.

## 6.2 Gender assignment

Assignment specifies the gender value of a noun in a particular language (Corbett 1991:3). As noted in 2.2, assignment may depend on two types of information, semantic or formal. With semantic assignment, the meaning of a noun is sufficient to determine its gender value, whereas formal assignment relies on phonological or morphological information from the noun.

Corbett (2014:114) recognizes the primacy of semantic motivation, writing, "Languages may use semantic assignment rules, or semantic *and* formal rules, but not just formal assignment rules."[6] He (1991:63-5) positions semantic and formal assignment along a continuum, with strict semantic assignment on one end and predominantly formal assignment on the other. The distinction between formal assignment and semantic assignment, then, is gradient and not one of fundamental difference, since all gender systems have at least a semantic core (Aksenov, 1984:17-18; as cited in Corbett, 1991:8). The semantic core identifies the semantic distinction that assigns the largest number of nouns, regardless of whether the remaining nouns are semantically or formally assigned, though the term is most appropriate for gender systems with a small number of gender values and very simple semantics. Systems with a larger number

[6] Corbett (2014:125) also writes, "To date there is no evidence for original systems having partially formal assignment." The use of 'original' here is akin to 'as far back as can be reconstructed', or to reference gender systems currently in development.

of gender values have more complex semantics, making the core less obvious and the term less useful.

In languages with a combination of formal and semantic assignment, formal assignment overlaps with, as well as complements, semantic assignment. Formal assignment overlaps with semantic assignment when it reiterates the semantic rule, and it complements semantic assignment when it provides motivation for nouns with meanings that fall outside of semantic assignment. Where there is conflict, semantic assignment takes precedence over formal assignment (Corbett, 1991:37-8). In Russian, for example, formal assignment rules are morphological and based on declension classes. Nouns in declension I are MASCULINE, nouns in declensions II and III are FEMININE, and others are NEUTER.[7] The nouns *djadja* 'uncle' and *deduška* 'grandfather' are in declension II. Formal assignment would make them FEMININE, but they are in fact MASCULINE due to semantic assignment, since they denote male referents. The oft cited counterexample to semantic assignment, the German NEUTER noun *das Mädchen* 'girl', is not actually a counterexample, since NEUTER is used for immaturity or underdevelopment of sex, not just sexlessness (Corbett, 1991:99-101).[8]

[7] Declension classes are determined by taking into account all relevant paradigms of inflection for a given noun, e.g. number, case and gender. Declension classes determine the gender of a noun, not the other way around. For example, in Russian, if a given noun is in declension class II, one can determine that its gender is FEMININE, but knowing a given noun is FEMININE, conversely, cannot be used to determine its declension class, i.e. it could be in declension class II or III. Further, nouns in declension II or III may share a gender value, but differ in how they inflect for other features such as number and case. Corbett (1991:64-5) uses this same reasoning to argue that Russian has morphological assignment and Algonquian languages do not.

[8] Corbett (1991:25-6, 99-101) provides further examples from the languages of Lak, Polish, Czech and Slovakian, where nouns denoting girls and unmarried women are NEUTER or even MASCULINE. Terms for older women, and those having born children, e.g. mother or grandmother, are still FEMININE.

Many of the most well-studied gender systems are Indo-European and have predominantly formal assignment, leading to a perception that the assignment of all gender systems are predominantly formal. According to the World Atlas of Language Structures (Dryer and Haspelmath, 2013:32A), however, out of a sample of 112 languages with grammatical gender systems, 53 have semantic assignment and 59 have a combination of semantic and formal assignment. This shows that semantic assignment is about as frequent as predominantly formal assignment.

The semantic underpinnings of a gender system may be based on biological sex, as is common in many Indo-European languages, yielding values of MASCULINE, FEMININE and sometimes NEUTER. However, the term for grammatical gender comes from Latin *genus* 'kind, sort' and does not in itself entail distinctions of biological sex (Corbett, 1991:1).[9] Not all gender systems have a semantic core based on on biological sex, though the majority do. The World Atlas of Language Structures lists 84 sex-based systems out of the 112 languages having grammatical gender, and just 28 non-sex-based systems, for a ratio of 3:1 (Dryer and Haspelmath, 2013:31A).

Other semantic factors for assignment include animacy, humanness, size, shape, edibility, liquid and even insect, among others (Corbett, 1991:30-2).[10] Semantic assignment for an entire gender system may consist of one or a combination of these. Similarly, assignment for a single gender value may be motivated by multiple semantic factors (Corbett, 1991:30-2), so we can speak of a gender value as having a heterogeneous or homogeneous composition. Nouns not

[9] To avoid conflating grammatical gender with biological sex, I prefer to avoid the term 'natural gender' for semantically assigned nouns in languages with grammatical gender based on biological sex.

[10] Corbett (1991:30, 199) reports that the Rikvani dialect of the Andi language, part of the Northeast Caucasian language family, has a gender value solely for nouns denoting insects.

assigned by positive semantic rules are termed the 'residue' (Corbett, 1991:13). Tables 9-14 show semantic assignment from a sampling of languages and illustrate a fraction of the variety found in the composition of gender values.[11]

Table 9. Composition of gender in French (Indo-European)

| Gender value label | Composition |
|---|---|
| MASCULINE | males + inanimate residue |
| FEMININE | females + inanimate residue |

Table 10. Composition of gender in Dizi (Omotic)

| Gender value label | Composition |
|---|---|
| FEMININE | females + diminutives |
| MASCULINE | residue |

Table 11. Composition of gender in Russian (Indo-European)

| Gender value label | Composition |
|---|---|
| MASCULINE | males + inanimate residue |
| FEMININE | females + inanimate residue |
| NEUTER | inanimate residue |

[11] Tables 9 and 11 are adapted from Dahl (2000:11). Table 10 is from data in Corbett (1991:11), as is Table 12 (1991:9) and Table 13 (1991:26). Table 14 is adapted from data in Plaster and Polinsky (2007).

Table 12. Composition of gender in Tamil (Dravidian)

| Gender value label | Composition |
|---|---|
| MALE RATIONAL (MASCULINE) | males (human and divinity) |
| FEMALE RATIONAL (FEMININE) | females (human and divinity) |
| NON-RATIONAL (NEUTER ) | residue |

Table 13. Composition of gender in Arakul (dialect o**f Lak, Northeast Caucasian)**

| Gender value label | Composition |
|---|---|
| I | males (human and divinity) |
| II | females (human and divinity), most nonhuman animates, most inanimates |
| III | residue |

Table 14. Traditional composition of gender in Dyirbal (Pama-Nyungan)

| Gender value label | Composition |
|---|---|
| I (bayi) | male humans, edible (non-human) animates |
| II (balan) | female humans, birds, water, fire, fighting, stinging |
| III (balam) | edible inanimates |
| IV (bala) | inanimate residue |

### 6.2.1 Gender assignment and diachrony

Over time, assignment may become less transparent, as once relevant motivations are lost or obscured by the natural process of language change (Kilarski, 2007:344). Opaque motivation

for assignment, found especially in Indo-European languages, has led to claims that assignment is semantically arbitrary. Bloomfield (1933:280) wrote, "There seems to be no practical criterion by which the gender of a noun in German, French, or Latin could be determined." Corbett (1991:7) writes in response, "Convincing accounts of gender assignment in French have in fact been offered and, while German gender appears more complex than French gender, recent analyses have gone a long way towards establishing practical criteria for gender assignment in German too."[12] Here, he refers to work done by Zubin and Köpcke (1984, 1986) on German gender. Using synchronic, diachronic and experimental data, they provide evidence in support of semantic assignment in an ontological sense. Zubin and Köpcke (1986:144) show, for example, that NEUTER gender is tied to the most generalized level of vague reference, e.g. *das ding* 'thing,' *das gebilde* 'product,' *das objekt* 'object,' *das wesen* 'being'. Gender assignment in German involves an interplay of semantic, morphological and phonological criteria, which has gained in opacity over time.

In other instances, motivations for assignment may become more transparent. This is reported for the Dyirbal language (Schmidt, 1985; as cited in Corbett, 1991:15-8; Plaster and Polinsky, 2007). From the composition shown in Table 14, nouns in gender III, denoting edible inanimates, have been reassigned to gender IV. Nouns denoting birds, water, fire, fighting and stinging things, which were in gender II, have also been reassigned, so that the current composition of genders is much simplified, as shown in Table 15.

[12] See Corbett (1991:57-62) for a review of research on gender assignment in French.

Table 15. Current composition of gender in Dyirbal (Pama-Nyungan)

| Gender value label | Composition |
|---|---|
| I (bayi) | male humans, non-human animates |
| II (balan) | female humans |
| IV (bala) | residue |

Some languages with more heterogeneous gender compositions are shown to be the result of a diachronic change from an earlier classifier system to a gender system, where nouns previously categorized by separate classifiers are combined into a single gender value (Corbett, 1991:139-41, 310-12). This has been shown in the Tyemeri group of the Daly languages (Tryon, 1974:231-233; Corbett, 1991:140), as well as in Dyirbal (Dixon, 1972, Plaster and Polinsky, 2007; 2010). The exact pathway by which this reanalysis happened is clear for one agreeing demonstrative in the traditional Dyirbal system; the demonstrative for gender III, *balam*, formed by merging the preexisting demonstrative *bala* with the noun classifier for non-flesh food, *mayi* (Dixon, 1972:353-4; as cited in Plaster and Polinsky, 2007:9). While the exact origins of the other agreeing demonstratives remain unknown, classifiers for nouns denoting edible animates, birds, fresh water, fire, stinging, as well as edible inanimates, are attested in related languages and explain their role in motivating semantic assignment in the Dyirbal gender system (Plaster and Polinsky, 2007:10-5).

While the change from a classifier system to a gender system may explain some heterogeneous semantics, it is also possible for internal dynamics to affect a change in the composition of an existing gender system over time (Corbett, 1991:97-104, 315-8). Changes may be internal to a gender system; for example, the heterogeneous gender value II in Tsez (Dido)

was shown to be the result of a merger of two earlier genders which remain separated in other Northeast-Caucasian languages (Polinsky and Jackson, 1999). A shift in assignment rules may also cause changes internal to a single gender value. Corbett (1991:98) notes that gender 1/2 in Bantu languages was traditionally only for human animates, but some languages in the family, e.g. Swahili and Lunda, have shifted to assigning all animates to gender 1/2.

In some cases, a single noun may affect a change in the composition of gender values, which Corbett (1991:98) labels a 'Trojan horse' noun. Such nouns are assigned to a gender value for a particular reason, but their admittance starts a domino effect, allowing other nouns to be similarly reassigned, as well. In the above case of some Bantu languages changing gender 1/2 from including human animates to all animates, the Lunda noun *muumbe* 'jackal' is identified as a Trojan horse noun due to frequent personification in folk stories (Childs, 1983:28, as cited in Corbett, 1991:98), with other frequently personified non-human animates following suit. This process may continue until all non-human animates are assigned to gender 1/2.

A related avenue of internal change in a gender system is analogical extension, also called semantic analogy or concept association. Hausa, a language of the Chadic family, has two genders, MASCULINE and FEMININE, with clear phonological assignment. Nouns ending in /-aa/ are FEMININE, and others are MASCULINE, with the residue, i.e. non-sex-differentiable nouns, occurring in both genders (Corbett, 1991:52-3). Loanwords follow normal semantic and formal assignment, but analogical extension is found in a few cases, too. The English loanword *mootàa* 'car' is FEMININE according to formal assignment. Other loanwords denoting vehicles are also FEMININE, motivated by analogical extension, despite lacking the formal criterion, including *karὺ* 'coach' and *tàkàsii* 'taxi'. Interestingly, another loan, *pèežoò*, denotes a Peugeot car when FEMININE, but a Peugeot bicycle when MASCULINE (Gouffé, 1971, as cited in Corbett, 1991:76-

7). This analogical extension seems to have led to a semantic assignment rule whereby nouns denoting cars are FEMININE, along with nouns denoting females and/or matching the phonological criterion.

A word of caution is in order regarding analogical extension. For the creative mind, it may be easily motivated, but difficult to constrain. It is also unpredictable in the sense that one cannot know a priori which analogies will be made and conventionalized by a speech community. In the next section, closer examination of the Dyirbal language and its analyses over many decades illustrates the need to recognize the reality of semantic assignment, while also tempering its application.

### 6.2.2 Case study: Dyirbal

Dixon (1972, 1982) documented and analyzed the gender system of Dyirbal, which proves useful in understanding gender assignment in Ojibwe.[13] His analysis remains mostly unchanged from that shown in Table 14, with the exception that he did not identify birds or stinging in gender II as relevant semantic motivations on their own. His analysis is shown in Table 16. While he did not draw semantic motivation from a previous classifier system, he did outline three principles to account for assignment of nouns outside of the semantic groupings shown in the table, e.g. birds and stinging. These three principles, to be discussed in turn, include mythological association, concept association and marking of an important property.

[13] Dixon (1986), and others working on Dyirbal, use ‘noun classes’ as a cover term for noun classes and gender. Following Corbett (1991), I use ‘gender’ as the cover term for these related forms of noun categorization as they are united in the characteristic of controlling agreement in associated words.

Table 16. Dixon's composition of gender in Dyirbal (Pama-Nyungan)

| Gender value label | Composition |
|---|---|
| I (bayi) | male humans, non-human animates |
| II (balan) | female humans, water, fire, fighting |
| III (balam) | non-flesh food |
| IV (bala) | residue |

The principle of mythological association states that a noun may be assigned according to the mythological associations of its referent, in contrast to its real-world associations. Since many celestial bodies and weather phenomena are personified in stories associated with them, their assignment is based on the biological sex of their personified referents, rather than their sexless and inanimate real-world referents. For example, rainbows, storms and the moon are personified as males, and are thus assigned to gender I, with human males. The sun, however, is personified as the wife of the moon and is in gender II. This principle also accounts for the majority of birds being assigned to gender II with human females, as they are considered the spirits of dead females. Other birds, considered to be the spirits of dead males, are in gender I.

The second principle, concept association, has already been discussed above as analogical extension. It is very broadly defined: if a noun has a strong conceptual link with another noun, it may be assigned to the same gender value. Dixon invoked this principle to motivate the assignment of nouns that would otherwise fit in the residue gender IV. For example, nouns denoting fishing spears and fishing line are in the gender I category with human males, since it was solely males who undertook this activity. Likewise, fruit-bearing trees are in gender III, along with their respective fruits.

The third principle, marking of an important property, may be viewed rather as the opposite of the second principle. Instead of nouns being assigned to the same category based on analogy or association, nouns may be assigned to a different category to signal a salient distinction. Dixon proposed that 'harmfulness' may be the property most likely to cause an unexpected assignment. For example, the vast majority of fish are in gender I, with males and other edible animates; however, three kinds of harmful fish, the stone fish, toadfish and gar fish, are in gender II.[14] Likewise, stinging plants are in gender II, instead of the expected residue gender IV. Not knowing about the classifier for stinging, it appeared to Dixon that nouns denoting harmful things were assigned to gender II to mark this important property.[15] However, the previous classifier motivates assignment of these nouns to gender II, and therefore the principle need not be invoked.

A better example of how the marking of an important property principle functions is found with the noun *guda* 'dog'. It may be expected that this noun would be assigned to gender I, with males and other non-human animates. However, the existence of a classifier for *edible* animates clarifies the semantic factor that motivates assignment of non-human animates to gender I.[16] Nouns denoting other animates which are inedible, e.g. dog, are assigned to gender II,

[14] While the stone fish and toadfish are poisonous, there is some dispute about whether gar fish are truly harmful (Plaster and Polinsky, 2007; 2010). They are not poisonous, as others have noted, and are compatible with the Yidiny classifier *minya* 'edible animal'. However, previous researchers made no mention of the fact that the eggs of the gar fish are poisonous.

[15] The Yidiny language has two classifier forms for stinging, depending on dialect. In the coastal dialects, *jama* is used, while in the Tablelands dialect, the form is *wirra* (Plaster and Polinksy, 2007:12).

[16] It was only with later generations of speakers that the motivating semantics of gender I were reanalyzed to (males and) non-human animates, which removed the specificity of 'edible' from non-human animates, resulting in a simplification and broadening of those semantics.

since genders III and IV permit only inanimates.[17] So, *guda* 'dog' was assigned to gender II not by a positive semantic rule, but because gender II contained the residue of non-human animates, i.e. those that are inedible. The important property that is highlighted by the application of this principle is edibility. The assignment of inedible animates to the applicable residue imbues them with the meaning of 'inedible' by virtue of the contrast with the edible animates. In summary, the semantically unmotivated assignment of nouns to the residue gender may gain meaning when in opposition to similar nouns whose assignment is semantically motivated by an important property, i.e. the opposition of gender values may be employed to mark contrast.[18]

Building on Dixon's work, Lakoff (1986; 1987) provides an analysis of gender assignment in Dyirbal utilizing radial categories, with the categories being gender values. The traditional approach to categories is that they exist objectively in the world, independent of the organisms perceiving them, and category membership is defined by shared properties. Lakoff's development of radial categories reflects a break from this traditional view, and emphasizes an embodied approach, according to which categories are influenced by creative thought and experience; they are not necessarily homogeneous. Radial categories are a way of schematizing such structured categories; some members are more central than others, with non-central members potentially linked to central members, and thus the category may be heterogeneous, i.e. not all members will be assigned to a category for the same reason.

[17] Dixon (1972:481; as cited in Plaster and Polinsky, 2007:10) notes that dogs are held in high regard by the people of Australia and are not compatible with the Yidiny classifier *minya* 'edible animal'.

[18] In summarizing Dixon's marking of an important property principle, Plaster and Polinsky (2007:5) write that, "noun class distinctions can be used to underscore differences in some critical characteristic" and Lakoff (1987:94) writes, "If a subset of nouns has some particular important property that the rest of the set does not have, then the members of the subset may be assigned to a different class from the rest of the set to 'mark' this property."

Lakoff's analysis differs from Dixon's in that he posits structure to the composition of (some) gender values. Nouns denoting males and females are the central members of genders I and II, respectively, and nouns denoting edible inanimates are the central members of gender III. Gender IV, containing the residue, does not have any central members nor any chaining among its members. In delineating the basic principles of human categorization illustrated in the Dyirbal gender system, Lakoff (1987:96) explicitly lists 'No Common Properties' and explicates:

> Categories on the whole need not be defined by common properties. There is no reason to believe that the Dyirbal find anything in common among women, fire, dangerous things, etc. Nor do they assume, so far as is known, that there is anything feminine about fire or danger, or anything fiery or dangerous about women. On the other hand, common properties seem to play a role in characterizing the basic schemas within a given category (edible plant, human male, human female).[19]

Lakoff (1987:95) does posit a 'chaining' principle, meaning some non-central category members are linked to more central, or prototypical members. This does not mean that every category member is linked to all other category members in the same way, i.e. by a single, shared feature. The motivating analogies for the links are varied. A portion of the particular chaining example he cites does have a simpler explanation, however. Lakoff, following Dixon, who in turn took his cue from the speakers, says the hairy mary grub is included in gender II because its sting is like a sunburn, which is linked to the sun, which is linked to women as it is mythologically personified as female. While the chain between the sun and femininity via mythological association is valid, as Plaster and Polinsky concede (2007:21), the further chain between the sun and hairy mary grub is unnecessary, as it can be accounted for simply by

[19] This excerpt stands in contrast to the way Lakoff's (1986; 1987) contribution is characterized by Plaster and Polinsky (2007; 2010). The title of their 2007 article is 'Women are not dangerous things' and they write (2010:122) "A child has no inherent (or learned) association of women with dangerous things, contrary to Lakoff's account". This is a misunderstanding of Lakoff's analysis and his title.

compatibility with the classifier for stinging things.[20] However, Lakoff does link women to the sun, the sun to fire, and then fire to water via concept association.[21]

Curiously, Plaster and Polinsky (2007:16-7) do not motivate the hairy mary grub's inclusion in gender II this way, instead positing formal assignment based on a small amount of data. They claim it is included because the noun form, *garri*, is identical to the noun form for sun, and take this as an indication of a formal assignment rule, bolstered by only one other noun in gender II, *garram* 'garfish', that shares their formal criteria /garr-/. They ignore the obvious, precursory semantic link between the two nouns, i.e. the bug was named after the sun because the sting is said to feel like a sunburn.

While Lakoff does posit some links, it is important to note that the motivation for those links is varied, and not all members are linked, e.g. inedible animates like *guda* 'dog' are not linked with other nouns in gender II. Lakoff views both Dixon's principle of mythological association and the important property principle as subsumed by the concept association principle, with which I am inclined to agree.[22] Concept association, i.e. analogical extension, can be used to draw similarity between two noun denotata, and assign them to the same category, or to distinguish them and assign them to separate categories; it is the same mechanism. Likewise, the role of mythological associations does not need to be stated as a separate principle. Corbett

[20] Corbett notes that mythological associations frequently factor into semantic assignment (1991:10).
[21] Similarly, though neither Dixon nor Lakoff proposed it because they did not have knowledge of the stinging classifier, stinging things may be said to be in gender II because they burn like a sunburn or the touch of fire.
[22] Lakoff (1986:15) renames Dixon's concept association principle as the domain of experience principle, i.e. certain domains of experience are relevant for certain speech communities and motivate links between category members.

(1991:317) notes how semantic distinctions, even those outside of mythology, are not strict and this is a normal aspect of semantic assignment. He writes,

> If the division is human/non-human where do gods fit in? And what if gods are represented as animals or inanimates? If the division is animate/inanimate what is the lower boundary? Is an animal killed for food animate or inanimate?[23]

Similarly, the German NEUTER noun *das Mädchen* 'girl', discussed in 6.2, represents a blurred line found in some languages, where females are not categorized as such until they reach a certain age or enter marriage (Corbett, 1991:25-6, 99-101). The boundaries of semantic assignment are conventionalized within a particular speech community, exemplifying Lakoff's claim that categories are embodied and do not exist in the world independent of human experience.

In a more recent treatment of gender assignment in Dyirbal, Plaster and Polinsky (2007; 2010) provide groundbreaking research linking the seemingly heterogenous gender values of Dyirbal to an earlier classifier system which is still present in neighboring languages. However, they do not show convincingly that assignment in Dyirbal can be explained without recourse predominantly, if not entirely, to semantics, as they further claim. Their accompanying arguments for formal assignment in Dyirbal are not compelling, lacking predictive power and based on a very small number of nouns. For example, they posit formal assignment to gender II from the word-initial sequence /gugu-/ based on only three nouns, *gugu* 'mopoke owl', *guguwuny* 'brown pigeon' and *gugula* 'platypus'. Plaster and Polinsky write (2010:133),

> Of these three, *gugu* and *guguwuny* are birds, and accordingly placed in class II as [+female]. *Gugula*, on the other hand, has no semantic basis for assignment to class II, which Dixon was unable to explain. However, the presence of the initial disyllabic

[23] Corbett (1991:317) offers further examples of these blurred lines from the language of Nunggubuyu (Pama-Nyungen), which has a human/non-human division. Nouns denoting ghosts, babies and dogs, which have special status as the only domesticated animal, show variable gender assignment.

> sequence *gugu-* in ‘mopoke owl’ and ‘brown pigeon’ likely was a sufficiently conspicuous feature of these class II nouns that ‘platypus’ was also drawn into the class.

They failed to note that a male platypus has spurs on its hind feet that are capable of delivering an excruciatingly painful, though nonlethal, dose of venom, i.e. *gugula* is semantically assigned to gender II because a platypus stings.

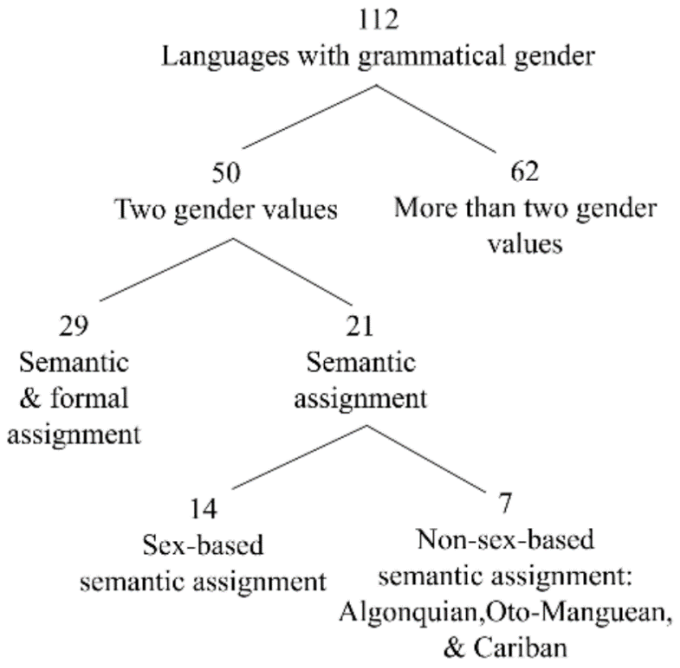
How the more specific semantic categories once found in Dyirbal’s gender II, e.g. fire, water, stinging, came to be grouped together, and whether they may somehow be linked to the central member of human females or not, remains an open question. What is clear is that our understanding of semantic assignment, and especially in gender systems with seemingly heterogeneous gender values, has greatly improved. Those studying such systems should consider whether classifiers may play a role in assignment, but should avoid reliance on special principles, other than analogical extension, to account for the composition of gender values. This knowledge is due in great part to the research conducted by Dixon, Lakoff, and Plaster and Polinsky, as well as to the speakers of Dyirbal who have shared their language with us. In the next section, I discuss how the role of semantic assignment in Ojibwe has been treated.

### 6.2.3 The debate of semantic assignment: How it relates to Ojibwe

The gender system in Ojibwe, and Algonquian languages generally, has an unusual combination of features, as it is bipartite with semantic assignment and a semantic core based on animacy. Out of the 112 languages with grammatical gender in the World Atlas of Language Structures sample, 50 of them, nearly half, have only two gender values. Of those 50 languages with two gender values, 29 have a mix of semantic and formal assignment, and 21 have only semantic assignment, which aligns with expectations, since it has already been established that nearly half

of the world's languages have purely semantic assignment. However, of those 21 with two gender values and semantic assignment, 14 have sex-based assignment and only seven have non-sexed-based assignment. This is also not too surprising, as it was established earlier that 75% of gender systems are sex-based according to the sample. Of these seven languages, half are from the Algonquian family (Ojibwe, Cree, and Passamaquoddy-Maliseet), one is an Oto-Manguean language (Chinantec), and another two are from the Cariban family (Hixkaryana and Macushi). The last one, the Mundari language of the Munda family, does not actually have grammatical gender, as discussed at the beginning of this chapter.

Figure 6. Gender assignment cross-linguistically




If the Ojibwe gender system had either a mix of semantic and formal assignment, or sex-based assignment, it would not have gained such notoriety. With animacy as its semantic core and being a Native language, it has been the topic of plenty of speculation about the worldview

of its speakers, since stereotypes about Native spirituality abound in the mainstream (Aldred, 2000; Ganje, 2003; Fleming, 2006). Assignment for the vast majority of nouns is accounted for under the semantic core of animacy; nouns denoting notionally animate things are ANIMATE, while those denoting notionally inanimate things are INANIMATE (mostly). The debate of semantic assignment has centered on the apparent exceptions: nouns denoting inanimates that are grammatically ANIMATE, e.g. *sab* 'net,' *kik* 'kettle' and *aagam* 'snowshoe' (Valentine, 2001:114). Do Ojibwe speakers really believe these things to be alive?

These exceptions have fueled a debate among linguists and anthropologists as to the relevance of semantics in a gender system. It has been argued that the existence of any nouns assigned outside the semantic core in a language should render the description of the entire gender system as arbitrary, i.e. not semantically motivated (Greenberg, 1954:15-6).[24] Greenberg argued that linguistic distinctions, e.g. whether a noun was ANIMATE or INANIMATE, should be treated as such, i.e. distinctions in the language that had no bearing in the real world and did not reflect significantly on its speakers.

Hallowell (1955:109, 1960, 1976:361-3) countered that what appear to be exceptions to outsiders are not exceptions for speakers, once the cultural significance of the exceptions are taken into account, foreshadowing aspects of the embodied cognition and categorization Lakoff proposed for Dyirbal. Hallowell's line of reasoning was pursued by Darnell and Vanek (1976) for Cree, Black (1977) and Black-Rogers (1982) for Ojibwe, and Straus and Brightman (1982) for Cheyenne. Instead of animacy as the semantic core, it was proposed that it was based on

[24] Commenting on this tendency, Kilarski (2007: 345) notes, "And yet in [interpretations of Algonquian gender] we find reflections of some of the properties persistently attributed to Indo-European gender, particularly a low degree of motivation, whether it be semantic, referential or cultural."

power, with values of POWERFUL and POWERLESS. All animate beings had power, obviously, but so could some inanimates, and the changing status of power accounted for a certain amount of indeterminacy. In this analysis, no nouns could be considered outside the semantic core, supposedly invalidating Greenberg's point.

This analysis gained some traction, appearing in Corbett's (1991:20-4) discussion of Algonquian gender. Oddly enough, this analysis also influenced a later account of assignment in Dyirbal, whose author disagreed with Lakoff, and instead proposed that potency and benign/malign power, rather than animacy and biological sex, were the central semantic motivations (Mylne, 1995). It is difficult to explain by this reasoning, however, why it is that not all culturally significant items are ANIMATE across all Algonquian languages, such as *manoomin* 'rice' in Ojibwe, *miishaami* 'sacred pack' in Meskwaki, or nouns denoting tobacco in Eastern Algonquian languages (Goddard, 2002:201). And while drum is ANIMATE in Ojibwe spoken on Walpole Island and Manitoulin Island, it is INANIMATE in Ojibwe spoken at Curve Lake (Valentine, 2001:116). The analysis based on power has since been mostly abandoned in Algonquian languages, as not all culturally significant items are ANIMATE and such nouns are, in fact, a source of both language and dialectal variation (Goddard, 2002).

These opposing positions are actually two sides of the same coin, as Dahlstrom (1995:52-3) points out, since both assume semantic assignment must be predictable, "...where predictable means that there is a single semantic feature which all members of the category have in common, and which does not occur with any nonmembers of the category." Lakoff (1987:65, 96) also discussed the relationship between the predictable semantic core, and the unpredictable yet motivated, nature of category membership, writing,

> In this case, the center, or prototype, of the [radial] category is predictable. And while the non-central members are not predictable from the central member, they are

'motivated' by it, in the sense that they bear family resemblances to it.[25]

In summary, the need to predict category membership, i.e. the composition of gender values, is tied to the idea that category membership is defined by a shared property, i.e. the feature that is picked out by the semantic core. In reality, category membership may be motivated, yet unpredictable, due to how unpredictably analogical extensions apply, thus producing heterogeneous structures, i.e. central members and non-central members, which may be semantically linked in various ways.

Dahlstrom's (1995) work on Meskwaki was the first of several applications of a modern approach to semantic assignment in Algonquian, including Quinn (2001) for Penobscot, and Goddard (2002) for Algonquian languages generally. These three studies outline not one, but multiple semantic factors that motivate assignment. Dahlstrom approaches animacy in Meskwaki from the perspective of radial categories (Lakoff, 1986; 1987). Rather than forming a homogenous semantic group, the ANIMATE category consists of core members associated with a specific set of properties, while others are included on the basis of various links. The central

[25] Expanding on the distinction between predictability and motivation, Lakoff (1987:96) writes,

> There is a big difference between giving principles that *motivate*, or *make sense of*, a system, and giving principles that *generate*, or *predict*, the system. Dixon's analysis explains why the Dyirbal system is the kind of system that human beings can function with. It does not predict exactly what the system will be. For example, one must learn which domains of experience are relevant to categorization and which are not. Thus, fish live in water, and fish are in class I, but that does not make water class I with fish, nor does it make fish class II with water. The domain of habitation is simply not important for Dyirbal classification. Dyirbal speakers simply must learn which domains of experience matter for classification and which myths and beliefs matter. What is predicted is that systems of classification tend to be structured in this way, that is, that there tends to be centrality, chaining, etc. The theory of categorization makes predictions about what human category systems can and cannot be like. It does not predict exactly what will be in a given category in a given culture or language.

I emphasize again that the centrality and chaining which Lakoff posits does not entail unilinearity.

members are picked out by ANIMATENESS, including humans and animals, while non-central members are motivated by semantic extensions of spiritual power, human representation, plants, natural phenomena, manufactured items, etc. She concludes that membership in the ANIMATE gender is largely motivated, but predictable only in hindsight.

In a survey of Penobscot, an Eastern Algonquian language, Quinn (2001, 2018) gives an analysis which departs from Dahlstrom's (1995) only in that central, animate category members are absent. Gender assignment is instead determined on the basis of analogical comparison between individual words. The semantic features of these analogies are intrinsic function and texture. Textural ANIMATE features include fruits and vegetables which are bigger or juicier, or puffy as opposed to flat baked goods. Functional ANIMATE features include fluid containers or wings, feathers and fins. ANIMATE assignment, in his analysis, is more akin to a cluster than a radial category, the difference being the absence of a core membership in the former.

Likewise, Goddard (2002) rejects the idea that apparent ANIMATE exceptions in Algonquian represent a homogenous, culturally salient category. He (2002: 225) states,

> Those who have thought that decontextualized collections of animate nouns directly reveal the mental culture of the Algonquian Other on its own terms seem to have been describing instead a projection of their own culture. Uncritical cultural relativism, made more extreme by unexorcised Neo-Whorfianism, has produced an interpretation of the Algonquian world-view that is as unsupportable on the facts as it should be inconsistent with common sense, though it may seem to confirm and affirm the exoticism of the Algonquian mind in a way that, however circularly, validates the approach taken. Still the Algonquian gender system does have something to tell us about the cognitive structures employed by Algonquian speakers, but in a subtler, less expected, and perhaps more interesting way than heretofore assumed.

Goddard (2002: 224) instead characterizes the ANIMATE value as setting up a functional contrast with the INANIMATE value, similar to Quinn, and consistent with an analysis of assignment by multiple semantic motivations. In summary, semantic assignment need not be unified by a single motivation. This avoids the pitfalls Greenberg (1954) warned of, i.e. drawing anthropological

conclusions from linguistic data, while offering a more satisfactory explanation for assignment than rote memorization and arbitrariness. The next section presents an analysis of semantic assignment in Ojibwe, building off the scholarship of these Algonquianists, as well as the cross-linguistic research.

### 6.3 'Exceptional' ANIMATES in Ojibwe: The link between gender and classifiers

Gender assignment in Ojibwe is relatively straightforward, i.e. nouns with notionally animate referents are assigned to the ANIMATE gender (98), while nouns with notionally inanimate referents are assigned to the INANIMATE gender (99). There are exceptions to this generalization found only in the ANIMATE gender, i.e. nouns with notionally inanimate referents assigned to the ANIMATE gender (100).

(98) Animate Referent and ANIMATE Gender

*ikwe* 'woman', *inini* 'man', *animosh* 'dog', *makwa* 'bear', *giigoonh* 'fish'

(99) Inanimate Referent and INANIMATE Gender

*waabigwan* 'flower', *ozid* 'his/her foot', *wiiyaas* 'meat', *nibaagan* 'bed', *izaaga'igan* 'lake'

(100) Inanimate Referent and ANIMATE Gender

*mitig* 'tree', *zesab* 'nettle', *asekaan* 'tanned hide', *miskomin* 'raspberry', *asin* 'a stone'

Nouns of the type found in (100) are numerous and diverse enough to warrant a considerable amount of attention from speakers, learners, linguists and anthropologists alike. The question is whether it is possible to motivate inclusion in the ANIMATE gender, along with humans and animals, of such a disparate group of nouns denoting pipes, beads, kettles, grain products,

tobacco, trees, drums, rocks, feathers, money, cars, and nets, and do it in an elegant way. I propose an analysis of gender assignment that draws on the semantics of the Ojibwe classifier system to motivate such 'exceptional' nouns. The gender assignment of nouns like those in (98) is motivated by their compatibility with the semantics of one of the sortal classifiers, illustrated by pairings below.

(101) Pairings of 'Exceptional' Nouns and Sortal Classifiers

a. *mitig* 'tree' - /-aatig-/ '1D, rigid', i.e. stick-like

b. *zesab* 'nettle' - /-aabiig-/ '1D, flexible', i.e. string-like

c. *asekaan* 'tanned hide' - /-eg-/ '2D, flexible', i.e. sheet-like

d. *miskomin* 'raspberry' - /-minag-/ '3D, small, round', i.e. berry-like

e. *asin* 'a stone' - /-aabik-/ 'mineral', i.e. metal, stone, glass

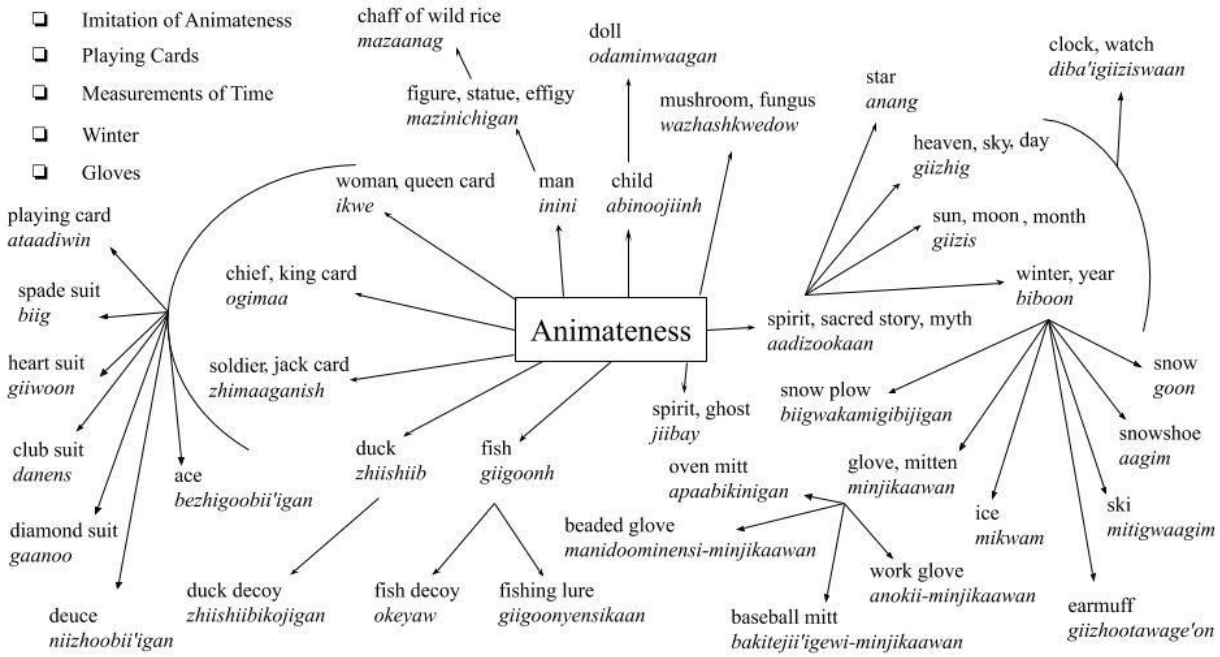
Nouns are assigned to the ANIMATE gender when their meanings reflect animateness, semantic compatibility with one of the five sortal numeral classifiers, or through analogical extension with nouns assigned via the first two routes. In the following sections, I show how the 'exceptional' ANIMATE nouns may be accounted for by appealing to the traditional sortal classifier system. I then discuss further considerations for the analysis, such as complexities arising from taxonomy, diachronic changes, dialectal variation and analogical extension.

The data for this gender analysis comes from the Southwestern dialect, sourced from the online Ojibwe People's Dictionary. From the Ojibwe People's Dictionary, all 'exceptional' nouns were compiled into a database, totaling 490 entries, of which the analysis accounts for all. Gender assignments used in this analysis are only from the Southwestern dialect and were not selectively chosen from different dialects to support the analysis.

This analysis is presented in the form of diagrams illustrating the semantic motivation and any analogical extensions that are posited. All nouns contained in the diagrams are listed as ANIMATE in the Ojibwe People's Dictionary. It is only necessary to account for the assignment of ANIMATE nouns, as all others are assigned to the INANIMATE gender by default, i.e. INANIMATE contains the residue. As Quinn (2001:1) writes that "we need only determine the criteria for 'animate'-ness; any noun failing to satisfy this criteria will automatically fall into the 'inanimate' category." There is a clear consensus that INANIMATE is the 'elsewhere' category across Algonquian languages (Dahlstrom, 1995:64; Goddard, 2002:221-224). The INANIMATE gender is also used in grammatical constructions with no expressed or implied noun, termed the neutral or default gender (Corbett, 1991:159, 203-17).

The diagrams are read as follows: The relevant semantic motivation, e.g. animacy or a sortal classifier, is located at the center. Arrows from the center to nouns represent direct motivation. Arrows from one noun to another represent an analogical extension. One noun may be responsible for the assignment of one or more nouns through analogical extension, but more often it seems that a group of nouns is responsible. In this case, an arc indicates the responsible group of nouns and the arrow(s) originate from there. Due to limitations of space, the diagrams show the assignment of a representative sample of nouns in the database. For considerations of transparency, nouns not shown in the diagrams are directly motivated by animacy, a sortal classifier, or an analogical extension that has expanded to an entire cluster of nouns and constitutes its own motivation, e.g. playing cards. If a noun from the database is the singular example of an analogical extension, i.e. the analogy did not expand to motivate the assignment of other nouns, it is included in the diagrams. This is to show that the role of analogical extension in the analysis is reasonably minimal.

Diagram 1. Motivation from animateness




In Diagram 1, the semantic motivation at the center is Animateness. Many nouns are assigned based on this, e.g. all humans, animals and spirits. Animals remain ANIMATE, even after they have been killed for food and other useful parts. Animateness is salient and transparent, which is why the gender values are often labeled ANIMATE and INANIMATE. Given its prominent role in gender assignment, it is not surprising that there are many analogical extensions stemming from nouns with animate meanings. For example, nouns denoting imitations of animate entities, e.g. statues, dolls and animal decoys, are ANIMATE. Where appropriate, nouns assigned by imitation of animateness are connected with relevant notionally animate nouns. For instance, *zhiishiibikojigan* 'duck decoy' is connected to *zhiishiib* 'duck'. Nouns denoting queen, king and jack playing cards are ANIMATE based on imitation, which has expanded to motivate

the assignment of all terms for playing cards to the ANIMATE gender, e.g. the numbered cards and suits.

On the right side of the diagram are celestial bodies personified in mythology, e.g. Grandmother Moon and *Biboon* the Winter-Maker. These are shown stemming from the noun *aadizookaan* ‘spirit, sacred story, myth’ to emphasize their origin, though they are motivated by the analogical extension of the imitation of animateness. As these nouns are also used to denote measurements of time, e.g. day, month and year, the cluster gives rise to the analogical extension that measurements of time are ANIMATE, explaining the assignment of *diba’igiiziswan* ‘clock, watch’. *Biboon* ‘winter’, being ANIMATE through the analogical extension from imitation of animateness, leads to the formation of a salient ANIMATE cluster consisting of associated wintery nouns, e.g. *mikwam* ‘ice’, *agim* ‘snowshoe’ and *goon* ‘snow’, and the analogical extension that winter is ANIMATE. Lastly in this diagram, nouns referring to winter gloves and mittens motivates the assignment of all kinds of gloves and mittens to the ANIMATE gender, even those that have nothing to do with winter, e.g. *apaabikinigan* ‘oven mitt’.

The rest of the diagrams have the sortal classifiers of Ojibwe as the semantic motivation at their center. There are traditionally five main classifiers (Valentine, 2001:331) recognized in Ojibwe. As established in 3.3, they are sortal numeral classifiers.

(102) a. bezhigw-**aatig** mtigoonhs
one-1D.rigid.CL stick.DIM
‘one (1D, rigid) small stick’

b. bezhigw-**aabiig** naabkwaagan
one-1D.flexible.CL necklace
‘one (1D, flexible) necklace’

c. bezhigw-**eg** waabooyaan

one-2D.CL blanket

'one (2D) blanket'

d. bezhgwa-**minag** sabaab

one-3D.small.round.CL ball.of.yarn

'one (3D, small, round) ball of yarn'

e. bezhigw-**aabik** zhooniyaa

one-mineral.CL money

'one (mineral) dollar'

The second diagram has at its center the sortal classifier /iig/ '2D, flexible', which shows phonologically conditioned variation with /eg/. Recall from the discussion in 3.3 that this sortal classifier has lost the distinction of flexibility which was attested as recently as the late 1800s. Since this distinction was relevant at the time it would have affected semantic assignment, I include it here. This accounts for nouns with different 'sheet-like' meanings, e.g. *wanagek* 'bark' and *agwashaan* 'shawl'. One important cluster here is composed of different kinds of hides, which are used to make drums and lead to the analogical extension that all kinds of drums are ANIMATE.

Diagram 2. Motivation from the sortal classifier /iig/ ‘2D, flexible’

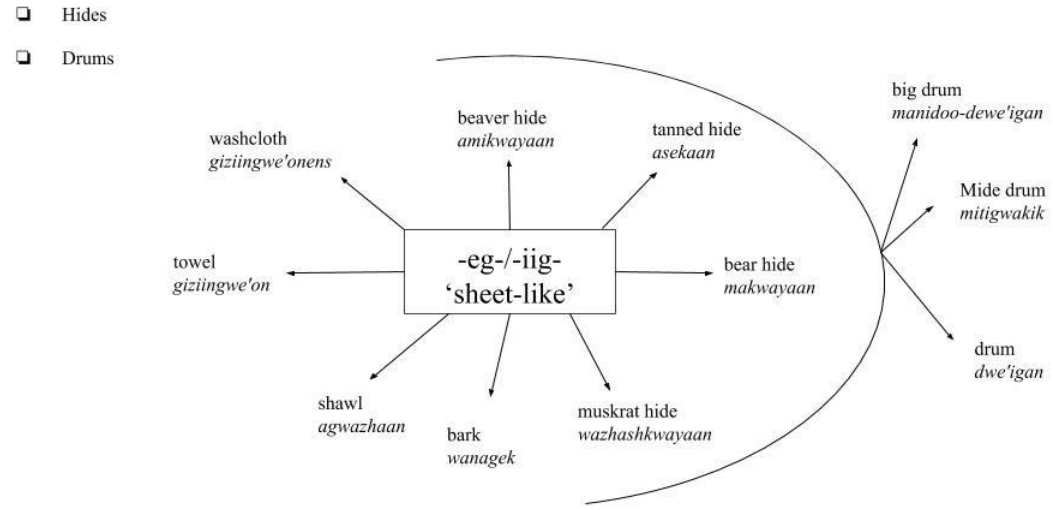
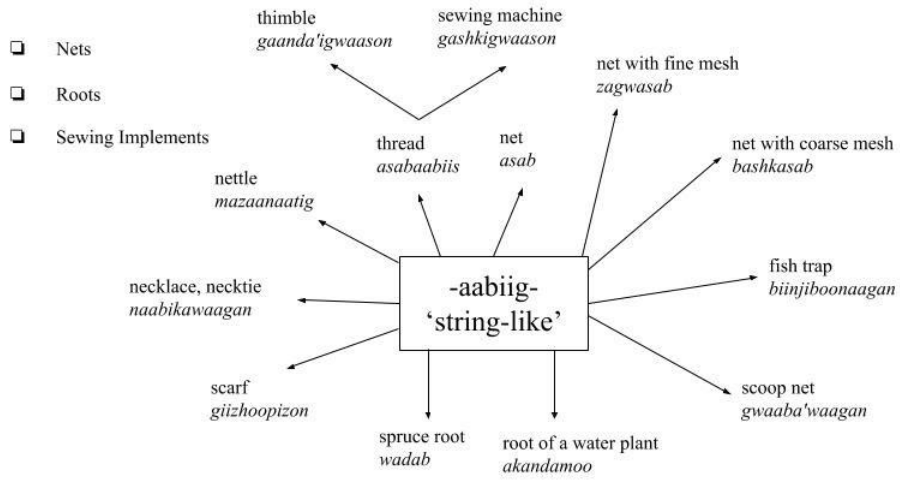



Diagram 3. Motivation from the sortal classifier /aabiig/ ‘1D, flexible’




The third diagram shows assignments motivated by the sortal classifier /aabiig/ ‘1D, flexible’. This includes some string-like plants, e.g. *wadab* ‘spruce root’ and *mazaanaatig* ‘nettle’. The fibers of these plants were traditionally used to make string. There is also

*asabaabiis* ‘piece of thread’ and importantly, *asab* ‘net’. These words have a clear relation, and all kinds of nets are thus assigned to the ANIMATE gender.

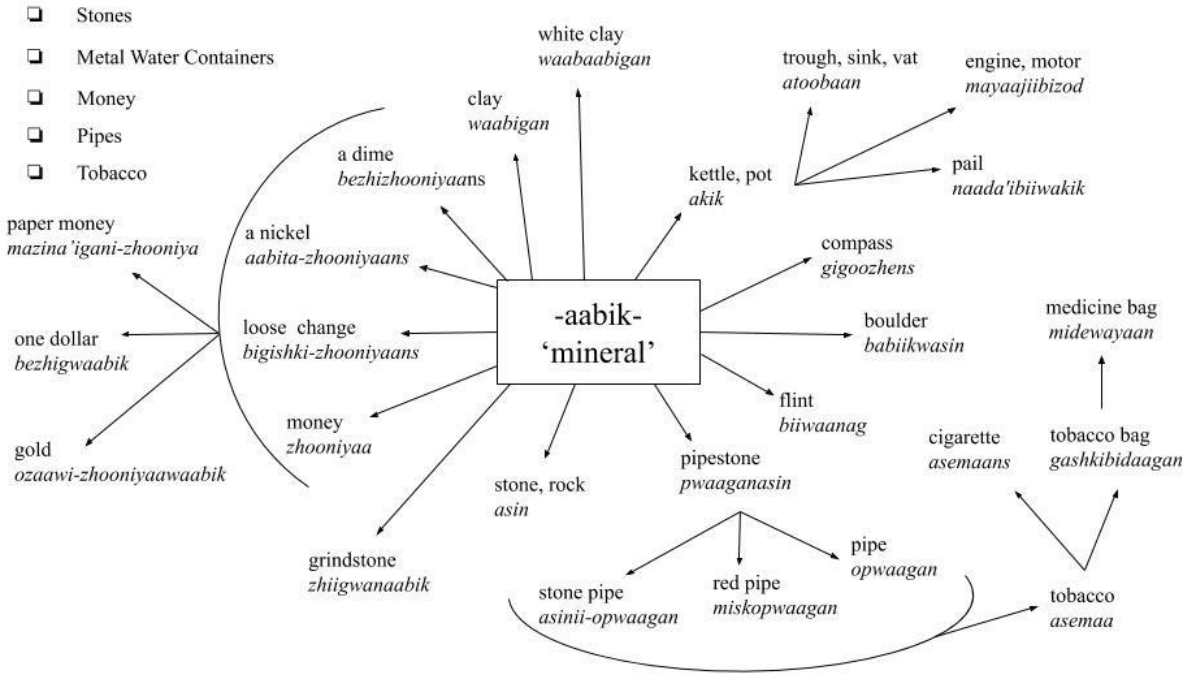
Diagram 4. Motivation from the sortal classifier /aatig/ ‘1D, rigid’


The fourth diagram is an important one, capturing a wide variety of nouns, the majority of which directly exhibit the ‘stick-like’ properties highlighted by the sortal classifier /aatig/ ‘1D, rigid’. This includes all kinds of trees and tree boughs. Many other nouns with stick-like meanings, such as *dewe’iganaak* ‘drumstick’, *ozhibii’igaanaak* ‘pen, pencil’ and *okaadaak* ‘carrot’, contain /aak/ ‘1D, rigid’, which is a lexical morpheme in nouns and a classifier in verbs. One analogical extension, from *okaadaak* ‘carrot’ to *miskokaadaak* ‘beet’ is strengthened by the derivational relation, i.e. a beet is translated as a ‘red carrot’, despite the bulbous shape.

Compatibility with this classifier accounts for the ANIMATE assignment of nouns such as *gaaway* ‘porcupine quill’, *miigwan* ‘feather’ and *nishkanzh* ‘my claw/nail’. Many kinds of claws are stick-like, i.e. long, narrow and rigid, and the same noun is used to refer to nails. The shape

and consistency of nails is similar to that of scales, leading to the ANIMATE assignment of *onaga'ayan* 'its scale (of a fish)' and the subsequent analogical extension to *zhiishiigwan* 'snake rattle'.

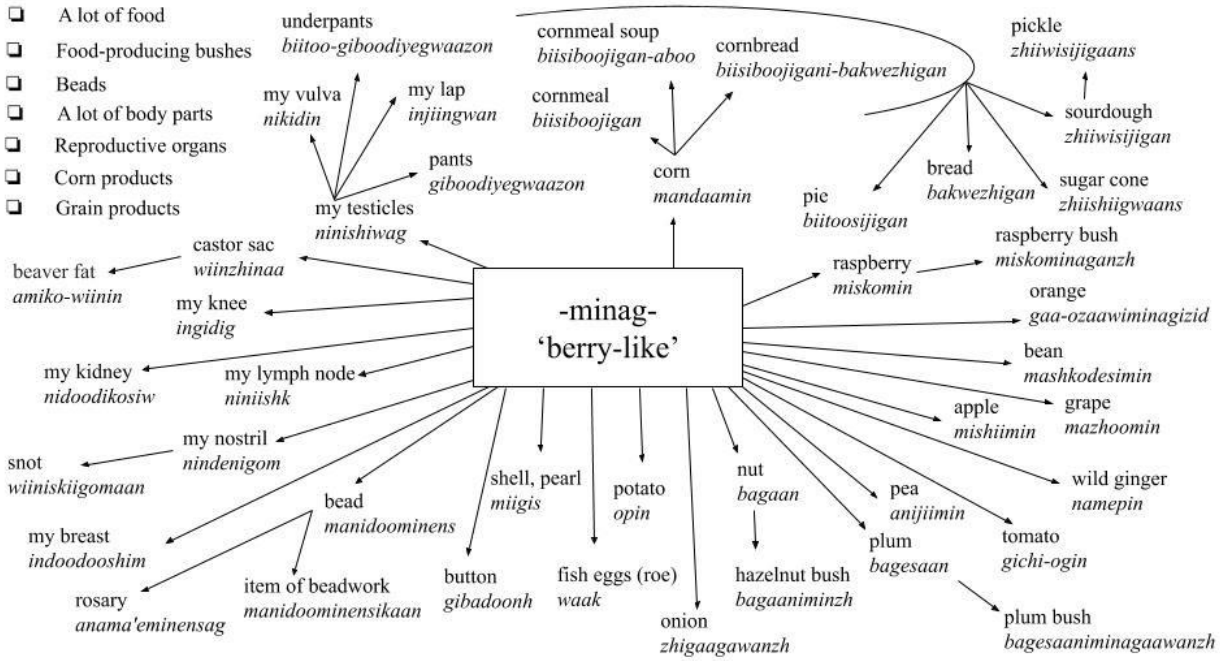
Diagram 5. Motivation from the sortal classifier /aabik/ 'mineral'




The next diagram features the sortal classifier /aabik/ 'mineral' at its center. This classifier highlights a particular material, rather than shape and flexibility as the previous sortal classifiers did. It includes such nouns as *waabigan* 'clay', *asin* 'stone' and *akik* 'kettle'. The last of these gives rise to the analogical extension that metal containers for water are assigned to the ANIMATE gender; previously they would have been made of clay or birch bark. Nouns with meanings related to currency are also ANIMATE, since the currency introduced by Europeans was made of metal. The cluster of nouns with the semantics of currency is so numerous, it forms its own analogical extension for ANIMATE assignment, applying to nouns with currency meanings

that are not even metal, e.g. *mazina'igani-zhooniya* 'paper money.' Finally, since all kinds of stones are ANIMATE, and pipes were made of stone and used with tobacco, this sortal classifier also accounts for the analogical extension of all kinds of pipes and tobacco as ANIMATE.

Diagram 6. Motivation from the sortal classifier /minag/ '3D, round'




The final diagram, showing motivation from the sortal classifier /minag/ '3D, round', is quite crowded. There are three groups of nouns showing 'mixed' gender assignment: plants, food and body parts. We have seen already that plants assigned to the ANIMATE gender can be accounted for mostly by compatibility with the sortal classifier /aatig/ '1D, rigid', and a few others with /aabiig/ '1D, flexible'. The sortal classifier /aatig/ '1D, rigid' also accounts for some nouns denoting food and body parts. The sortal classifier /minag/ '3D, round' accounts for the remaining nouns denoting food, plants and body parts which are assigned to the ANIMATE gender, as well as shells and beads. Notably, fruit-producing bushes, at least those that produce

small, round fruit, are ANIMATE. The assignment of raspberry to the ANIMATE gender, and strawberry to the INANIMATE gender, in particular, drew the attention of Greenberg (1954:15-6). He commented,

> If it turned out, for example, that speakers of Algonquian have a shrine to the raspberry and treat it like a spirit, while the strawberry is in the sphere of the profane, and if similar facts could be adduced regarding the other terms, then a definition of Class I affixes would be possible by reference to the nonlinguistic behavior of Algonquian speakers. I do not believe that the ethnographic facts about these peoples will allow of such a definition.

This line inspired Straus and Brightman (1982) to title their article on gender assignment in Northern Cheyenne 'The implacable raspberry." While Greenberg was right that there are no shrines or other behaviors signaling worship of the raspberry, the shape gives all the information that is needed. Raspberries are spherical, while strawberries are more often than not, pointed and heart shaped. The word for strawberry, *ode'imin*, translates literally as 'heart-berry'.

The body parts assigned to the ANIMATE gender are also small and round.[26] It seems that *ninishiwag* 'my testicles' may have motivated the analogical extension to nouns referring to and associated with reproductive organs. Another small, round body part, which resembles testicles but serves a very different purpose, is *wiinzhinaa* 'castor sac'. These are found on beavers of both sexes, and are responsible for the secretion of a fatty, yellowish substance called castoreum. Beavers use castoreum for marking their territory and adding additional waterproofing to their fur. This substance was highly prized by European traders, and to this day, humans use it in food and perfume manufacturing for its vanilla-like qualities. An analogical extension from the derivationally related *wiinzhinaa* 'castor sac' motivates the assignment of *amiko-wiinin* 'beaver fat' to the ANIMATE category, despite all other kinds of fat being INANIMATE.

[26] The body parts motivated by /minag/ 'berry-like' also come in pairs, though this may simply be caused by natural animal symmetry.

Focusing on *mandaamin* ‘corn’, the kernel of which is certainly berry-like, we see that all corn products are also ANIMATE by analogical extension. Prior to the introduction of wheat products, grain products were made of corn. Later, this analogical extension continued for all kinds of wheat products. While *zhiiwisijigaans* ‘pickle’ is not itself a wheat product, the noun is formed by adding the diminutive to *zhiiwisijigan* ‘sourdough’, so that a pickle is literally called ‘a little sourdough.’

### 6.3.1 Multiple motivations

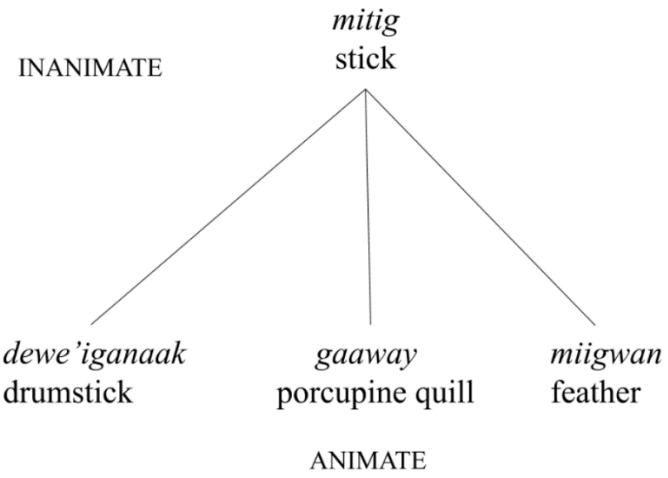
It is possible for a single noun to have multiple motivations for assignment to the ANIMATE gender value. For example, *mitigwaagim* ‘ski’ could be ANIMATE through association with winter or the classifier /aatig/ ‘1D, rigid’, and *zhiishiigwaans* ‘sugarcone’ could be ANIMATE through association with grain products or *zhiishiigwan* ‘snake rattle’. This is not a problem for the analysis, since more motivation leads speakers to the same conclusion, i.e. assignment to the ANIMATE gender.

### 6.3.2 Effect of taxonomy

There are several nouns which are expected to be ANIMATE by the analysis so far, but are actually INANIMATE. These include *wiigwaas* ‘birch bark’, *asabaab* ‘thread’, *mitig* ‘stick’, *bigiw* ‘tar’, and *miin* ‘blueberry’, which were noted as possible lexical origins for the classifiers in section 3.3.1. The reason these nouns are INANIMATE, despite being perfectly compatible with the semantics of the sortal classifiers, is that they name the category as the superordinate term, i.e. they are hypernyms. A ‘hypernym’ has a broad meaning that includes the meanings of more specific words, while a ‘hyponym’ represents an instance of the category picked out by the

hypernym. In Ojibwe, hypernyms for the sortal classifiers are INANIMATE and the hyponyms are ANIMATE. This effect of taxonomy is not uncommon in gender assignment (Zubin and Köpcke, 1986).

Figure 7. Hyponyms of the hypernym *mitig* 'stick'




There may be more than one hypernym per sortal classifier. For example, /iig/ '2D, flexible' has *wiigwaas* 'birch bark' and *bashkwegin* 'hide' both as hypernyms. The noun INANIMATE *wiigwaas* 'birch bark' is both a hypernym and a hyponym, as it is itself an instance of the category.[27] Indeed, birch bark served many uses, e.g. in canoes and baskets, and was more highly valued than other kinds of bark (Nyholm, n.d.). As a hypernym, *bashkwegin* 'hide', is INANIMATE, while specific kinds of hides, the hyponyms, e.g. *asekaan* 'tanned hide, *mawkwayaan* 'bear hide' and *ajidamoowayaan* 'squirrel hide', are ANIMATE.

[27] A term for a hypernym that is simultaneously a hyponym is an 'autohyponym' (Horn, 1984).

Figure 8. Hyponyms of the hypernym *wiigwaas* ‘birch bark’

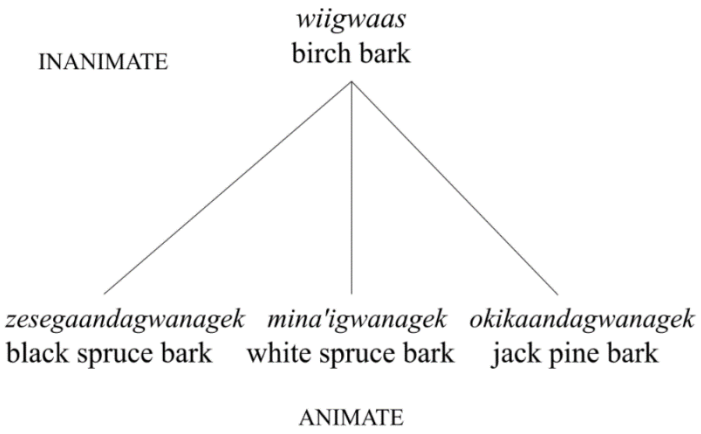
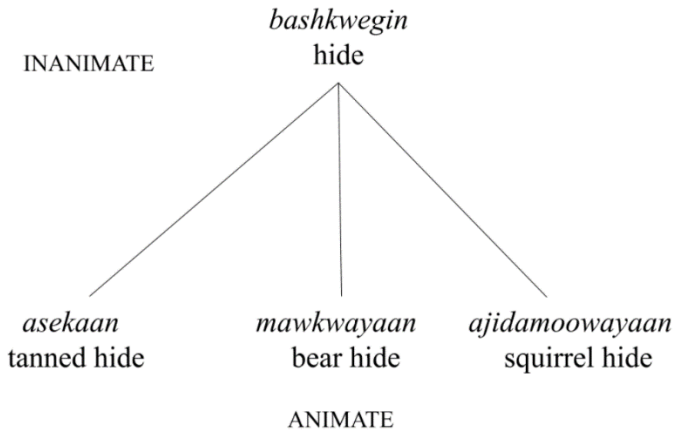



Figure 9. Hyponyms of the hypernym *bashkwegin* ‘hide’



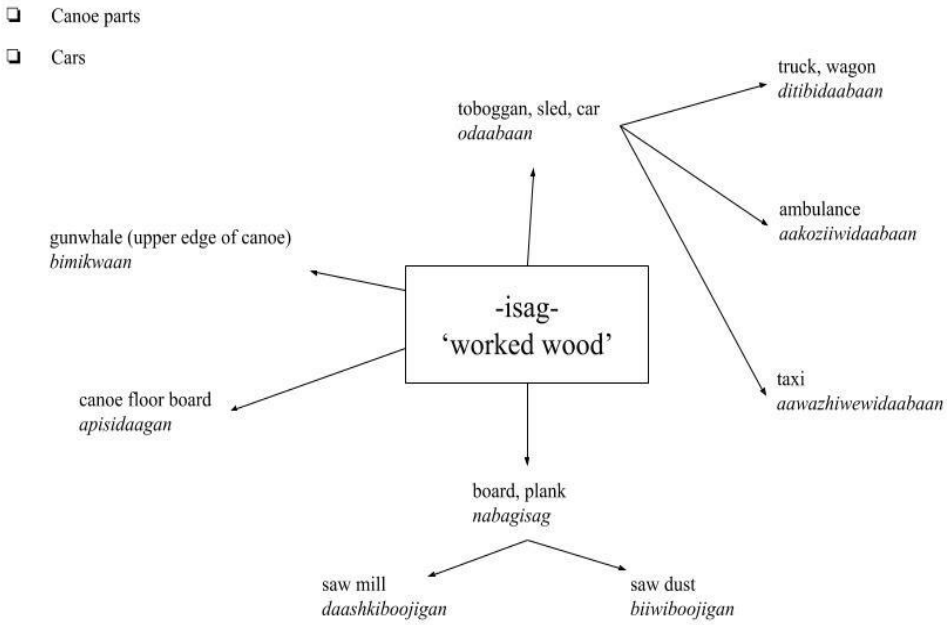

### 6.3.3 Diachronic changes

The reason some other nouns are not ANIMATE, despite compatibility with the semantics of the sortal classifiers, is that the sortal classifier system seems to be fading. New nouns may be uncategorized by the sortal classifiers, and nouns that once were may cease to be. As discussed in section 3.5.2, the sortal classifier /aabik/ ‘mineral’ no longer functions as such, and has instead become lexicalized as the morpheme for ‘dollar’. A narrowing of semantics may be indicative of

the fading of a classifier system (Grinevald, 2000:85). Indeed, it seems another classifier, /isag/ ‘worked wood’, has undergone a change similar to /aabik/ ‘mineral’, albeit earlier.

The most recent usage of /isag/ ‘worked wood’ as a numeral classifier, however, was mensural and not sortal. Baraga (1878:311) records its usage for measurements of barrels, kegs and boxes, with the mensural numeral root /ngodw-/ ‘one’. More specific mensural classifiers have since replaced it, e.g. /makak/ ‘box’, and /isag/ is currently only a verbal classifier, as discussed in section 4.1. The meaning is certainly compatible with a sortal usage, and given that it accounts for nouns with meanings of canoe parts and cars as shown in Diagram 10, this analysis predicts that it functioned as a sortal classifier in the distant past. It seems it changed from a sortal numeral classifier to a mensural numeral classifier, to not functioning as a numeral classifier at all. The likely lexical origin of /isag/ is shown in (103) (Valentine, 2001:411).

Diagram 7. Motivation from the sortal classifier /isag/ ‘worked wood’



(103) Lexical origin of /isag/ ‘worked wood’

*mi**s**an* ‘firewood’ > /is/ + post-medial /ag/ = /isag/ ‘worked wood’

The fading of the sortal classifier system has an effect on the system of gender assignment such that the motivation from the sortal classifiers is no longer salient for speakers. Instead, the salient motivations are noun clusters like those listed earlier, e.g. pipes, beads, kettles, grain products, tobacco, trees, drums, feathers, reproductive organs, cars, nets. Many of these are the result of analogical extensions, which may or may not have caught on in certain speech communities. Of apparent exceptions to semantic assignment, Kilarski (2007:344) says one way to treat them may be as evidence for “the presence of assignment rules that have now gone out of use”. These nouns are semantically assigned, but their motivations are no longer productive. Instead, motivations are reanalyzed to explain the composition of nouns in each gender value, and that composition may also change, as a reflection of the productivity of semantic assignment.

### 6.3.4 Dialectal variation

The ‘exceptional’ nouns under discussion are a source of dialectal variation. Goddard (2002:224) says,

> … the application of the semantic opposition between the genders to many specific cases involves a cultural component that can vary and that leads to different gender-class membership in different speech communities.

Valentine (2001:116-8) notes that the Eastern and Odawa dialects differ from others, including the Southwestern dialect, in that nouns for money, stones, and even hides are INANIMATE. This variation is the result of differing analogical extensions being conventionalized in different speech communities, the fading of the sortal classifier system and the productivity of the gender

system. For some speech communities, it was salient that money was made of metal, a mineral material, and that it was novel, thus all money terms are assigned to the ANIMATE gender, while for other speech communities it was not. Diachronic research is needed to ascertain the details of why certain noun clusters show variation, e.g. whether those nouns have ceased to be categorized with sortal classifiers or changed gender assignment.

Valentine (2001:118) provides examples of nouns that are ANIMATE in the Eastern Ojibwe and Ottawa dialects, but not in Southwestern Ojibwe. Some seem to reflect variation or change in motivation from the sortal classifier /aabik/ 'mineral', e.g. *bgiw* 'gum, pitch'and *waasechganaabik* 'glass, windowpane'. Still some may be motivated by analogical extension with other ANIMATE nouns, e.g. *bookdoonzh* 'pear' may be motivated by analogy with *mishiimin* 'apple' or simply by the sortal classifier /minag/ 'small, round', if the bulbous shape was salient. Several also seem to show that the ANIMATE assignment of *miigwan* 'feather' extended to other nouns by analogy, forming a salient cluster, e.g. *nningwiigan* 'my wing' and *miizhaaboojiinaagan* 'eyelash'; further, fins appear similar to wings without feathers, likely accounting for *nninjigaans* 'my fin' as ANIMATE.

This analysis predicts that the nouns most likely to show variation are those motivated solely by compatibility with sortal classifiers that have not been reanalyzed as one of the aforementioned noun clusters, e.g. stone, those that are the result of an analogical extension that did not become conventionalized in certain communities, e.g. drums, grain products, or money, as well as those that constitute less central, more unique analogical extensions, e.g. *wiiniskiigomaan* 'snot'.

### 6.3.5 Productivity and analogical extension

That the gender assignment system has continued to evolve is a sign that it is productive; it is a dynamic, living system. Aikhenvald (2000:313) says, "The productivity, or vitality, of a system is measured by its ability to accept and classify new members, and reanalyse and extend the semantic range of a noun categorization device over time." This leads to the question of how analogical extension can be reined in, to which I offer three constraints. First, only those extensions that resonate with speakers will become conventionalized. An analogical extension can start with a single 'Trojan horse' noun (Corbett, 1991:98-9), which is assigned by a new analogical extension, but then opens the door for similar nouns, e.g. *akik* 'kettle', leading to many other metal containers for water being in the ANIMATE category. Goddard (2002:214-6) points out that the ANIMATE is used to denote referents that are fancy, special, or unusual, while the INANIMATE is used for ordinary or general referents. It certainly seems contact with Europeans and the introduction of some novel items may have had an effect on which analogical extensions became widespread and salient enough to serve as motivation for assignment, e.g. playing cards, money, metal containers for water, wheat products, though many more are rooted in Ojibwe cultural experience, e.g. winter, hides, drums, nets, tobacco, worked wood, corn.

Secondly, a derivational relationship is often visible between nouns showing analogical extension, e.g. with the addition of the diminutive suffix *zhiiwisijigan* 'sourdough' becomes *zhiiwisijigaans* 'pickle'. The nouns *mazinichigan* 'figure, statue, effigy' and *mazaanag* 'chaff of wild rice' seem to share the initial /maz-/ 'fancy, figured image'. Third, cross-linguistically, many of the extensions shown here are common, e.g. celestial bodies personified in mythological stories and thus categorized with humans or animates (Corbett, 1991:10). It is important to note that the more analogical extensions are used in gender assignment, the less transparent it

becomes. This leads newer speakers to regularize the system, i.e. change it to match salient motivations.

### 6.3.6 Grammatical gender in Ojibwe is a (folk) taxonomy

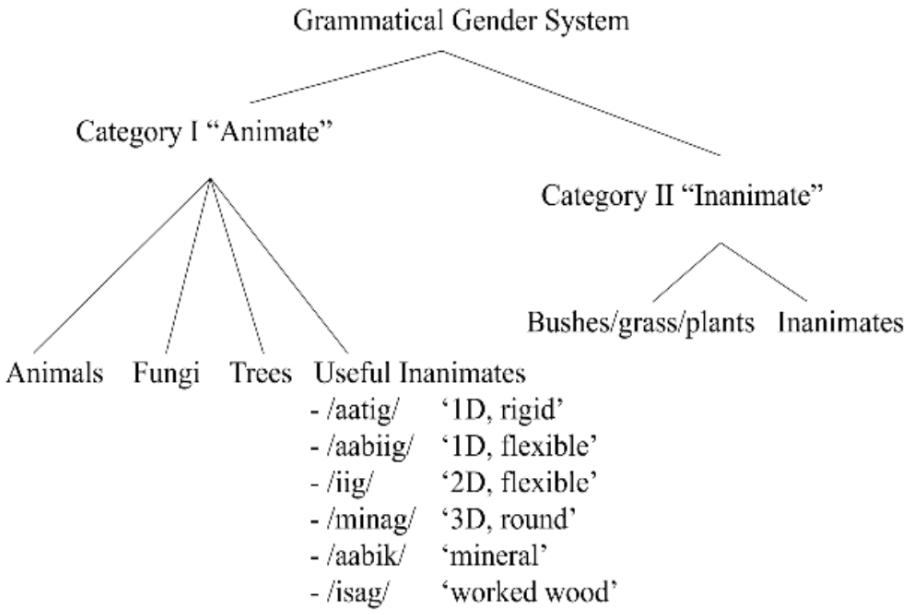
There has been much discussion and theorizing about the apparently 'exceptional' nouns of Ojibwe gender assignment, those that have inanimate referents but ANIMATE gender. It has been shown that there is no need to consider these nouns as exceptional, once the role of sortal classifiers and a small amount of analogical extensions are taken into account. Nouns may be assigned to the ANIMATE gender if their meaning is 1) animate, 2) compatible with one of the sortal classifiers, or 3) associated through analogical extension with a noun assigned via the first two routes. Dialectal variation is the result of differing analogical extensions in different speech communities, and the loss of motivation from the fading sortal classifier system in combination with the robust productivity of the gender system.

The relevant distinction encoded in the Ojibwe gender system is not really animacy per se, but a bipartite 'folk' taxonomy of all entities, living and nonliving. At the top are animals (human and nonhuman), fungi (which are more closely related to animals than plants) and trees. Also included are 'useful' inanimates, i.e. those referents picked out by the sortal classifiers. Plants of smaller stature than trees, such as bushes and grasses, form the other category along with nonliving things. These various criteria for assignment to the ANIMATE gender value, animacy and sortal classifiers, may be semantically linked, e.g. the sortal classifiers denote 'special' items, but it need not be any more specific than this. The heterogeneity of the category is due to the many distinctions picked out by sortal classifiers collapsing into a smaller number of gender values, in this case, just the ANIMATE category. The radial structure of the ANIMATE

category is not exotic, rather, it is widely attested in noun categorization cross-linguistically (Aikhenvald, 2000:308-17).

If language may be taken as encoding both universal and culture-specific conceptualizations of the world around us, and noun categorization is one of the most direct methods of achieving this, then a grammatical gender system with semantic assignment based on taxonomy is very informative. While this analysis seems to account for gender assignment in Ojibwe quite well, further detailed research on gender and classifier systems within other Algonquian languages and across the language family (e.g. Goddard, 2002 for gender; Biedny, et al., in press for classifiers), will test the adequacy and broader applicability of this approach.

Figure 10. Folk taxonomy of grammatical gender in Ojibwe




The labels of ANIMATE and INANIMATE are helpful in identifying the semantic criteria assigning the majority of nouns to gender values in Ojibwe, i.e. the semantic core. However, assignment has been shown to be motivated by multiple semantic factors due to the influence of

the sortal classifiers and analogical extension, and the labels may obscure this. In Northeast Caucasian languages, which are also characterized by gender values with more heterogeneous compositions, labels are simply Roman numerals. Corbett (1991:9-10) commenting on the relative arbitrariness of labels for gender values, writes, "While names for genders are helpful, there is much to be said for the numbering system, since it prompts us to spell out exactly which types of nouns are included." This has been suggested for Ojibwe, by Black (1969:179), writing,

> It would be perhaps less confusing if these grammatical classes were referred to as Class I and Class II (as pointed out by Greenberg, 1954), since the class names are not meant to be exact semantically but are conventions for describing the grammar of Ojibwa.

Goddard (2002:224) expresses a preference for labels of 'high' for ANIMATE and 'low' for INANIMATE, as an update to the labels of 'noble' and 'base' used by seventeenth-century Jesuit linguists. To answer the question posed earlier as to whether Ojibwe speakers believe all referents denoted by nouns in the ANIMATE gender to be alive, I defer to the venerable Ojibwe scholar, Cecil King (2007:208), who writes,

> My language is an Algonquian language, I am told, and it is structured by describing things as animate or inanimate, so I am told. English definitions of the terms 'animate' and 'inanimate' lead people to think of things as being alive or not alive. Is this how our language is structured? I think not. In Odawa, all so-called inanimate things could not be said to be dead. Does animate then mean having or possessing a soul? Is this a sufficient explanation? I think not. Is the animate-inanimate dichotomy helpful in describing the structure of my language? I think that it is limiting, if not wrong outright. For in Odawa anything at some time can be animate. The state of inanimateness is not the denial or negation of animateness as death is the negation of the state of aliveness. Nor can something have a soul and then not have a soul and then acquire a soul again. In Odawa the concept of animateness is limitless. It can be altered by the mood of the moment, the mood of the speaker, the context, the use, the circumstances, the very cosmos or our totality. English terms imprison our understanding of our own linguistic concepts…. We want to come back to our own words, our own meanings, our own definitions of ourselves and our own world.

Having established the motivations for semantic assignment in Ojibwe which account for nouns previously characterized as exceptions, the next chapter discusses how the productive

semantic assignment of gender may be employed by speakers in storytelling, as well as derivationally, to create new lexical items.

# CHAPTER 7

# RECATEGORIZATION OF GENDER

## 7.1 Introduction to recategorization of gender

Gender is differentiated from other morphosyntactic features, such as case and number, in that a gender value is inherent to the noun (Corbett, 2014: 87-88). Each noun is said to correspond to one gender value, though a noun may take multiple values for case or number. However, there are exceptions to this generalization, instances where the gender of a noun may change, referred to as 'recategorization' (Corbett, 2014:121-4). This is perhaps most familiar to English speakers in the context of animals, which are usually referred to with the nonhuman pronoun *it*, but can also be referred to with *he* or *she* when the natural gender of the animal is known, and for some speakers, when a special connection exists. Sex differentiability is also possible in stories for personified animals and inanimate objects, which undergo the shift to human pronouns.

Corbett (2014:122) notes that languages vary in the flexibility of recategorization. In English, such a shift is quite easily accepted for all animals and inanimates, while in some other languages, recategorization allowing for sex differentiability of animals is never permitted, even in stories. Such is the case in Tsez, which has gender values of MASCULINE and FEMININE for humans, ANIMAL and INANIMATE, with notional inanimates also found in the FEMININE and ANIMAL categories (Comrie, 2005; Corbett, 2014). In still other languages, only certain animals may be recategorized. In Kutto, animals are normally associated with the FEMININE value and only hyenas, dogs, leopards and mice may be recategorized as MASCULINE. Similarly, only hyenas, leopards and hedgehogs may become MASCULINE in the related language of Kushi (Leger, 1998; Corbett, 2014).

In languages such as Savosavo (Wegener, 2008; Corbett, 2014), Lakukaleve (Terrill, 2003; Corbett, 2014), and Walman (Brown & Dryer, 2008; Corbett, 2014), recategorization may occur to mark a nominal as diminutive or affective. In Savosavo, for example, inanimates are MASCULINE, but become FEMININE when taking diminutive or affective marking to indicate that size is smaller than expected or to confer some special status. Regardless of the extent to which recategorization is possible in a given language, it is clear that the resultant meaning is language-specific.

In Algonquian languages, where classification is between ANIMATE and INANIMATE rather than biological sex, recategorization is not tied to sex differentiability. Recategorization may consist of temporary changes from INANIMATE to ANIMATE due to personification in stories. Among Algonquianists, this is commonly referred to as 'gender shift', though Goddard (2002:211) also uses the term 'nonce shift', 'nonce' defined as 'a word or phrase that is coined for use on a single occasion'. I hereafter refer to this type of temporary recategorization of gender as 'nonce recategorization'.

It is important to note that the possibilities for recategorization described up to this point do not result in the creation of a new lexical item. A personified, masculine hyena in Kutto or Kushi is still a hyena, and a small box in Savosavo is still a box. Crucially, there is a second type of recategorization that results in the creation of a new lexical item, which I call 'lexical recategorization'.[1] Where nonce recategorization is temporary, lexical recategorization is a permanent addition to the lexicon. In the following sections, I explain more thoroughly the

[1] Goddard (2002:211) states that certain examples of recategorization of gender are 'lexicalized', in contrast to other nonce shifted examples. Though he does not create a formal term for it, the term 'lexical recategorization' is inspired by his discussion.

motivations and methods for nonce recategorization in Ojibwe, before describing the lesser known cases of lexical recategorization.

### 7.2 Nonce recategorization

Nonce recategorization occurs most commonly in stories, when an INANIMATE noun is personified, performing actions typically associated with animate beings. In the example below, the Ojibwe trickster and hero character, Nanabozho, charges his anus with keeping watch for unfriendly Dakotas (Nichols 1980:21-22; as cited in Brightman, in press). The noun *ojiid* 'his/her anus' is usually INANIMATE, but recategorizes to ANIMATE, as shown by agreements with the verb and demonstrative. Since the noun is obligatorily possessed by a third person, the noun, demonstrative and verb are also all marked for obviation.

(104) "bwaanag, bwaanag" gaa-inwe-nikwen **iniw** **o-jiidiish-an**."
Dakotas, Dakotas PST.IC-sound-VAI.DUB.OBV **that.AN.OBV** **3-old.anus-AN.OBV**
'"Dakotas, Dakotas," that old anus of his must have sounded.'

As discussed in sections 4.2 and 6.1.1, verbs often come in pairs to agree with both ANIMATE and INANIMATE relevant participants. However, certain verbs, such as the AI stems *gaagiigido* 'talk to someone 'and *zhawendaagozi* 'be blessed,' lack inanimate counterparts. Nonce recategorization may occur when an inanimate noun serves as the argument determining agreement for such verbs, but that is not the whole story, as speakers have morphological means to derive these verb forms.

Derivation of II verbs from AI verbs may be achieved with the addition of the verb final /-magad/, allowing speakers the option of maintaining a noun as INANIMATE without sacrificing

verbal agreement.[2] An example of maintaining the noun as INANIMATE while preserving grammatical agreement through the use of a derived VII is shown below from Andrew Medler's telling of *The Mirror Being*, as transcribed by Bloomfield (1957:213-6).

(105) Baamaa dash ngoding dbikak gii-bi-yaa**mgad-ni**
later then once be.night.VII.CONJ pst-here-come.**VAI>VII-0.SG**
**iw** **waawaabmowin**.
**that.IN.SG** **mirror.IN.SG**
'Finally then one night there came that mirror.'

Despite this available strategy, many personified INANIMATE nouns are still recategorized to ANIMATE. Speaking of such nonce recategorized nouns across Algonquian languages, Brightman (2011:11) says they are 'of more general occurrence in a broader range of contexts'. It appears then, that nonce recategorization is a matter of speaker stylistics, rather than a situation in which the grammar leaves the speaker without options. Brightman (2011; in press) also points out that there is inter-speaker variation in the strategy chosen to resolve personification of INANIMATE nouns. In addition to avoiding recategorization with the use of the VII-deriving final, he outlines several potential strategies.

A speaker may recategorize an INANIMATE noun as ANIMATE from the beginning of a story, and maintain that recategorization throughout the narration. Brightman (in press) notes that the normally INANIMATE *migoos* 'awl' and *mashkiigimin* 'lowbush cranberry' are switched to ANIMATE and maintained as such throughout a story titled "The Awl and the Cranberry" (Jones

[2] Other Algonquian languages have this verb final, as well. For example, in Cree, the form is /-makan/ and in Meskwaki the form is /-mikat/ (Brightman, 2011).

1919:130-1). A speaker may also choose to recategorize back and forth, from INANIMATE to ANIMATE and back again.This may be observed in *The Mirror Being* tale, as the earlier example left *waawaabmowin* ‘mirror’ as INANIMATE and derived the agreeing verb form with /-magad/. Later, this same noun appears with ANIMATE agreements in the demonstrative and verb.

(106) Miinwaa dash e-aazhoodbikak gii-bi-**yaa**

again then IC-the.next.night.VII.CONJ PST-here-come.**VAI.3.SG**

**aw waawaabmowin**.

**that.AN.SG mirror.AN.SG**

‘The next night that mirror being came again.’

Brightman (2011) notes that the likelihood of a noun undergoing nonce recategorization does not appear to be tied to the relative animateness of the action denoted by the verb. This is especially salient in the two examples from the Mirror Being, as differing gender values for the same noun are used with the same verb. Goddard (2002:208) also states that in Meskwaki, “inanimates seem to be freely assigned the powers of speech, comprehension, and thought without shifting gender.”

We have already seen that the noun may remain as INANIMATE and verbal agreement may be maintained, even when a corresponding INANIMATE verb form does not exist, through the use of /-magad/. Perhaps unexpectedly, it is also possible for the speaker to keep the noun as INANIMATE, forego use of /-magad/ and opt for disagreement between the verb and noun. This strategy is shown below for Cree (Straus & Brightman, 1982:115-7; as cited in Goddard, 2002:204). The noun and associated demonstrative *oom oostikwaan* ‘that head’ are INANIMATE, though the AI verb should agree with an ANIMATE subject.

(107) Eekwa kiitahtawee kaa-**piikiskweet** **oom** **oostikwaan**

and at.some.point PST.**speak.VAI.3.SG** **that.0** **head.0**

'Then presently, that head spoke'

While nonce recategorization predominantly occurs as a shift from INANIMATE to ANIMATE, the reverse is also attested, as noted by Goddard (2002:210-1). This is despite Hockett's (1966:62) claim that "there are routes for a shift of gender from inanimate to animate, but not the opposite." This directionality is a tendency, rather than a grammatical constraint. In the following Meskwaki example, a noun that is ANIMATE shifts to INANIMATE based on its referent. The ANIMATE noun, *kemeshoomesenaana* 'our grandfather', recategorizes to INANIMATE *kemeshoomesenaani*, as it is used to refer to a ceremonial pole, which was previously designated in the text as the INANIMATE *mehtekwi* 'pole'. This nonce recategorization is evidenced by the change from the ANIMATE gender marker /-a/ to INANIMATE /-i/, as well as agreement in the demonstrative and verbal inflection.

(108) Neeyaapi-meko eenahkateekehe wiih-inahkateewi **mani**

same.as.before-emph the.way.**0.SG**.stood **0s**.will.stand.so **this.IN**

**kemeshoomesenaani**.

**our(incl).grandfather.IN**

'This grandfather of ours will go back and stand just where it stood.'

[Goddard, 2002:211]

The ANIMATE noun (grandfather) is used to bestow special status on an inanimate referent (pole). In the previous examples, the referent changed animacy and speakers had the option of reflecting

that change in the gender of the associated noun, i.e. an inanimate thing became animated. In this example, the referent does not change animacy, but the associated noun changes gender to reflect that of the noun. This is not uncommon in nonce recategorization; similarly, Corbett (1991:9) notes that in Tamil, *yaaNai* 'elephant', which normally has a non-human gender value, recategorized to a MASCULINE or FEMININE gender, can refer to a man or woman with elephant-like qualities.

Corbett (2014: 122-124) points out that such flexibility is also found in the morphosyntactic features of person, number and case. As an example of fluid person marking, he discusses a doctor greeting a patient. It is standard to address others with the second person form in English, but a doctor in an attempt to formulate a good bedside manner might instead use the second person inclusive form, asking, "*How are we today?"* As for number marking, the English noun *water* is overwhelmingly used as a mass noun and is unable to be pluralized as such. It can, however, undergo recategorization to a count noun when it denotes a standardized unit, in turn making other number values available, e.g when asking a waiter for *two waters*. In the next section, I examine a different kind of recategorization which results in the creation of a new lexical item.

### 7.3 Lexical recategorization

In Ojibwe, new nouns may be created solely by a change in gender, termed 'lexical recategorization'. This type of recategorization differs from the previously discussed nonce recategorization in that the shift is not temporary, but becomes a permanent addition to the lexicon. This is illustrated through pairs of nouns that share a form and have related, but distinct

meanings, with the only difference being their gender values. The nouns in each pair take differing inflections and agreements and are listed separately in dictionaries.

The meanings of these new lexical items are motivated by semantic assignment. In each set of examples, the motivating semantic factor for the ANIMATE noun is listed. The ANIMATE motivations illustrated here include animateness and imitation of animateness (Dahlstrom, 1995:57), trees, grain/grain products (Valentine, 2001:116), gloves/mittens, horns, money, and flexible sheets. The following pairs are found in the Ojibwe People's Dictionary of the Southwestern dialect. The second example, *wezhgonid* 'fishtail' is found in Valentine (2001:120) from the Eastern and Odawa varieties, but reflects a cross-dialectal onomastic use of the ANIMATE gender.

(109) ANIMATE as Animateness or Imitation of Animateness

| | |
|---|---|
| a. INANIMATE gichi-mookomaan | b. ANIMATE Gichi-mookomaan |
| 'big knife' | 'American' |
| c. INANIMATE wezhgonid | d. ANIMATE Wezhgonid |
| 'fishtail' | 'Fishtail' (name of a person) |
| e. INANIMATE gaaskaabasigan | f. ANIMATE gaaskaabasigan[3] |
| 'smoke-cured meat' | 'smoke-cured animal or fish'' |
| g. INANIMATE odaminwaagan | h. ANIMATE odaminwaagan |
| 'a toy, a plaything' | 'a doll' |

[3] Animals killed for food are still assigned to the ANIMATE gender, as mentioned in section 6.3.

(110) ANIMATE as Glove or Mitten

a. INANIMATE apaabikinigan
‘a potholder’

b. ANIMATE apaabikinigan
‘an oven mit’

c. INANIMATE biitoonigan
‘sandwich’

d. ANIMATE biitoonigan
‘glove or mitt liner’

(111) ANIMATE as Playing Card

a. INANIMATE ataadiwin
‘a gambling game, a wager’

b. ANIMATE ataadiwin
‘a playing card’

(112) ANIMATE as Grain or Grain Product (from sortal classifier /minag/)

a. INANIMATE biisiboojigan
‘a grinder, a mill’

b. ANIMATE biisiboojigan
‘corn meal’

c. INANIMATE ozaawaakizigan
‘a toaster’

d. ANIMATE ozaawaakizigan
‘a piece of toast’

e. INANIMATE abwaajigan
‘roasted meat or fish’

f. ANIMATE abwaajigan
‘bread cooked over a fire’

g. INANIMATE zaasagokwaan
‘something fried’

h. ANIMATE zaasagokwaan
‘a piece of fry bread’

(113) ANIMATE as Tree (from sortal classifier /aatig/)

a. INANIMATE mitig
‘wood, a piece of wood, a stick’

b. ANIMATE mitig
‘a tree’

c. INANIMATE ashkaatig
‘a stick of green wood’

d. ANIMATE ashkaatig
‘a tree with green wood’

e. INANIMATE mishiiwaatig
‘a stick of dry wood’

f. ANIMATE mishiiwaatig
‘a dead dry tree’

g. INANIMATE ozhiga'igan
‘a faucet’

h. ANIMATE ozhiga'igan
‘a tapped tree’

i. INANIMATE wiigob
‘inner bark of a basswood’

j. ANIMATE wiigob
‘a basswood tree’

k. INANIMATE wiigwaas
‘birchbark, a piece of birchbark’

l. ANIMATE wiigwaas
‘a birch tree’

(114) ANIMATE as Horn (from sortal classifier /aatig/)

a. INANIMATE eshkan
‘an ice chisel’

b. ANIMATE eshkan
‘horn (of an animal), antler’

(115) ANIMATE as Money (from sortal classifier /aabik/)

a. INANIMATE zhooniyaa
‘silver’

b. ANIMATE zhooniyaa
‘money’

c. INANIMATE zhooniyaawaabik
‘silver’

d. ANIMATE zhooniyaawaabik
‘a coin’

(116) ANIMATE as Flexible Sheet (from sortal classifier /iig/)

a. INANIMATE agwazhaan
‘a blanket’

b. ANIMATE agwazhaan
‘a shawl’

(117) ANIMATE as Vehicle (from sortal classifier /isag/)

g. INANIMATE zagapijigan
'something towed: a trailer, a towed boat, something used for hitching: a hitch, a tow rope'

h. ANIMATE zagapijigan
'something towed, a trailer'

The following examples are repeated from above, to show that the ANIMATE gender may also be used to denote something that is special or specific, as opposed to the INANIMATE version, which denotes the ordinary or generic. This semantic motivation is discussed by Goddard (2002:214-7) and seems to have cross-familial applicability.

(118) ANIMATE as Specific (Inanimate as Generic)

a. INANIMATE ataadiwin
'a gambling game, a wager'

b. ANIMATE ataadiwin
'a playing card'

c. INANIMATE gaaskaabasigan
'smoke-cured meat'

d. ANIMATE gaaskaabasigan
'smoke-cured animal or fish'

e. INANIMATE zaasagokwaan
'something fried'

f. ANIMATE zaasagokwaan
'a piece of fry bread'

g. INANIMATE zagapijigan
'something towed: a trailer, a towed boat, something used for hitching: a hitch, a tow rope'

h. ANIMATE zagapijigan
'something towed, a trailer'

Note that the above pairs showing 'ANIMATE as Specific' are still compatible with regular semantic assignment in Ojibwe. This particular semantic motivation is secondary and, of course,

only salient when the ANIMATE form has an INANIMATE counterpart, i.e. nothing is specific or special without the generic or ordinary to illustrate the contrast. The ability of differing gender values to emphasize contrast was discussed in relation to the Dyirbal data in section 6.2.2. Dixon labeled it the 'marking of an important property' principle, but as Lakoff pointed out, it is better subsumed under analogical extension. The 'important property' that is marked in Algonquian languages most often reflects the ANIMATE category as denoting something that is specific or special in contrast to the general or ordinary. Goddard (2002:224) notes this role of contrast in the assignment of gender in Algonquian languages, writing,

> The basic meaning of the animate gender is a function of the contrast with the inanimate gender. Looking at the animates by themselves and attempting to connect the dots does not reveal it. But when large numbers of seemingly arbitrary animates are examined together with semantically close inanimates, patterns of contrast are revealed that define the semantic correlates of the animate category.

I add to this the caveat that the contrasts expressed by the ANIMATE /INANIMATE opposition are constrained by the salient motivations for semantic assignment in that they cannot violate them. For example, it is very salient for speakers that trees are ANIMATE, and it would thus be unexpected that lexical recategorization results in an ANIMATE noun denoting a type of tree.

While many of the above pairs showing lexical recategorization are shared across dialects, e.g. *gichi-mookomaan, mitig, eshkan,* there is some variability depending on the analogical extensions that spread in different speech communities. For example, we would not expect to find the pairs associated with money or flour products in the Eastern and Odawa dialects (Valentine, 2001:118), as the analogical extension did not become conventionalized as a motivation for assignment with those speakers. The following pairs are specific to the Eastern and Odawa varieties, though their semantic motivations are shared.

(119) ANIMATE as Reproductive Organ

| a. INANIMATE baashkzigan | b. ANIMATE baashkzigan[4] | |
|---|---|---|
| 'a gun' | 'a penis' | [Rhodes, 1985:166-7] |

(120) INANIMATE as Vehicle

| a. ANIMATE mkizin | b. ANIMATE mkizin | |
|---|---|---|
| 'a shoe' | 'a tire' | [Valentine, 2001:115] |

As with nonce recategorization, the direction of lexical recategorization is usually from INANIMATE to ANIMATE, but this is a tendency rather than a formal constraint. Goddard (2002:211; Nichols & Nyholm, 1995:69) provides the noun pair *ishkodekaan* ANIMATE 'fire-steel' and INANIMATE 'lighter' as an example of the opposite direction of derivation. The ANIMATE noun denotes the earlier fire starter, and the INANIMATE denotes the later, more modern device. The ANIMATE noun is motivated by 'ANIMATE as Mineral' from the sortal classifier /aabik/. Another example he provides, this time from Meskwaki, is *amowa* 'bee' and *amowi* 'honey'. Since Meskwaki has overt gender, the /-a/ and /-i/ formally mark the differing gender values. Goddard states that the INANIMATE 'honey' must have been derived from ANIMATE 'bee' because honey-producing bees were introduced to North America by colonial European settlers.

In conclusion, languages vary in the degree of acceptable recategorization of gender. Gender in Ojibwe permits several kinds of recategorization. It may be of the nonce variety, which does not result in a significant change in meaning and is temporary. Nonce

[4] This example is dialectal slang from Eastern Ojibwe spoken at Curve Lake. Rhodes (1985:166-7) identifies this example as part of a larger metaphor in Eastern Ojibwe, SEX IS HUNTING. Another example of this metaphor is INANIMATE *wiiyaas* 'meat' and ANIMATE 'sexual object'.

recategorization is a stylistic device used, for instance, in storytelling. Recategorization may also be of the lexicalized variety, which results in a relatively significant change in meaning and is a permanent addition to the lexicon. For both nonce and lexical recategorization, shifts from INANIMATE to ANIMATE are more common, but the reverse is also possible. In the next section, I argue that lexical recategorization serves as evidence that grammatical gender may participate in derivational processes.

### 7.3.1 Lexical recategorization is gender as derivation

It is well known that noun classes may participate in derivational processes (Mufwene, 1980; Bresnan & Mchombo, 1995; Demuth, 2000; Grinevald, 2000:60; Aikhenvald, 2000: 266-8; Kihm, 2005). It can be seen in the following data that a change in noun class alone is sufficient to indicate a change in the lexical meaning of the stem. Examples are given from Swahili (121), Tswana (122) and Lak (123).

(121) a. m-/wa-tóto
‘child’
b. u-tóto
‘childhood’
c. m-/wa-cháwi
‘sorcerer’
d. u-cháwi
‘witchcraft’
e. m-/Ø-adúi
‘enemy’
f. u-adúi
‘enmity’ [Mufwene, 1980: 250]

(122) a. Class 1 mo-tswana
‘Tswana person’
b. Class 7 se-tswana
‘Tswana language/customs’
c. Class 14 bo-tswana
‘Tswana territory’

d. Class 1 mo-sadi
‘woman’

e. Class 7 se-sadi
‘female behavior’

f. Class 14 bo-sadi
‘femininity’

[Creissels, 1991; as cited in Grinevald, 2000:60]

(123) a. Class 1 kurču
‘widower’

b. Class 2 kurču
‘widow’

c. Class 3 kurču
‘barren cow’

d. Class 4 kurču
‘fallow land’

[Friedman, 1996:195, Lak]

Further, participation in derivational processes is also found in well-known gender systems that have a mix of semantic and formal assignment. A sample of noun pairs showing this derivational use of gender are shown below for Spanish (124), Italian (125), Hebrew (126) and German (127). While noun pairs based on the semantic core of biological sex are found in these languages, as well, especially in the case of professions, this sample illustrates that the derivational use of gender is not limited to the core.

(124) a. MASC el cerezo
‘the cherry tree’

b. FEM la cereza
‘the cherry fruit’

c. MASC el manzano
‘the apple tree’

d. FEM la manzana
‘the apple fruit’

e. MASC el cometa
‘the comet’

f. FEM la cometa
‘the kite’

(125) a. MASC il rosa
‘the rose color’

b. FEM la rosa
‘the rose flower’

c. MASC il caccia
'the fighter'

d. FEM la caccia
'the hunt, chase'

e. MASC il morale
'the morale'

f. FEM la morale
'the moral'

(126) a. MASC magav-im
wiper-PL
'wipers'

b. FEM magav-ot
towel-PL
'towels'

[Ritter, 1993: 796]

(127) a. MASC der See
'the lake'

b. FEM die See
'the sea'

c. MASC der Erbe
'the heir'

d. NUT das Erbe
'the inheritance'

e. MASC der Ekel
'the revulsion'

f. NUT das Ekel
'the obnoxious person'

g. MASC der Pack
'the stack, pile'

h. NUT das Pack
'the package'

Inflectional and derivational morphology are distinguished by a contrasting set of characteristics, some shown in Table 17.[5] In comparing these characteristics, there are several arguments in favor of labeling the above lexical recategorization of gender as evidence that gender on nouns may be both inflectional and derivational. Some view the distinction between inflectional and derivational morphology as a continuum, with canonical inflection and canonical

[5] This table is created from information in Haspelmath and Sims (2010:90).

derivation on either end (Bybee, 1985; Payne, 1985; Mel'čuk, 1993; as cited in Kibrick, 2005). Others view it as a strict dichotomy, prioritizing anywhere from the first to the first three characteristics (Anderson, 1982 for the former).

Table 17. Characteristics of inflectional and derivational morphology

| **Inflection** | **Derivation** |
|---|---|
| relevant to the syntax | not relevant to the syntax |
| obligatory expression of feature | not obligatory expression of feature |
| unlimited applicability of feature values | possibly limited applicability of feature values |
| same concept as base | different concept from base |
| abstract meaning | concrete meaning |
| compositional meaning | possibly non-compositional meaning |

The first characteristic is relevance to the syntax. The gender feature on nouns is most certainly relevant to the syntax, as the noun is the controller of agreement, and associated words must reflect the gender value of the noun. The second characteristic is the obligatoriness of the expression of the feature in all applicable instances. As stated earlier, in a language with grammatical gender, all nouns must be assigned a gender value. A noun phrase without a gender value is a non-prototypical controller, e.g. dummy pronouns or infinitives, and presents an issue for the usual operation of this syntactic process, though there are strategies for handling it (Corbett, 1991:203-17). These first two characteristics place gender on nouns squarely in the inflectional camp.

When evaluating the third characteristic, the applicability of feature values, however, gender on nouns resembles derivation. For inflection, it is expected that all values of a feature are

able to be expressed without arbitrary limitation on the relevant part of speech. For example, in languages with the feature of case, a noun should have a form for every case value. Otherwise, it would not be able to fit into all the appropriate syntactic slots. Where there are paradigm gaps in inflectional morphology, there is a motivation, usually semantic. For example, some stative verbs may not express some aspectual values. For example, the English stative verb *know* is incompatible with imperfective aspect, since it is a unitary, non-repetitive event, e.g. **She is knowing me* (Haspelmath and Sims, 2010:93).

In contrast, a noun has one gender value available to it. The fact that all nouns do not have a corresponding noun formed by recategorization of gender is arbitrary. If the INANIMATE *mashkiki* is 'medicine', why not ANIMATE *mashkiki* for 'doctor', which is instead *mashkikiiwinini*, composed of 'medicine' and 'man', or *mashkikiiwininiikwe* 'doctor (female)', composed of 'medicine' and 'man' and 'woman'. An argument for semantic blocking, i.e. the existence of a noun already expressing the relevant meaning, could be made in some cases, but certainly not all, especially where neologisms are concerned.

The remaining characteristics in the table, considered less crucial, also indicate that gender on nouns has derivational properties. Inflected word-forms express the same concept as the base, but derived lexemes may express a concept different from that of the base. For example, all inflected forms of the verb *eat* express the action of eating, but the derivation of *gardener* from *garden* denotes a very different referent, e.g. one must be animate and the other inanimate. It is very clear that the above noun pairs denote different, albeit related, referents, e.g. ANIMATE *ozaawaakizigan* 'a piece of toast' and INANIMATE *ozaawaakizigan* 'a toaster'.

Lastly, the change in gender values reflects concrete meaning, rather than abstract, and it is also non-compositional. Consider the above example *biisiboojigan*, which denotes corn meal

when ANIMATE and a corn grinder when INANIMATE. The component parts, as listed in the Ojibwe People's Dictionary, are the VTI2 *biisiboodoon* 'grind, mill, grate it, saw into smaller pieces' and the nominalizer /-gan/. The verb is composed of /biis-/ 'fine, in small particles, break into pieces' and the verb final /-bood/ 'act on it by sawing or abrading'. In this instance, the gender value of ANIMATE adds the meaning of corn, which is very concrete. While most of the meaning is fairly compositional, there is no morphology that clearly indicates that the INANIMATE noun will be the thing that processes the grinding, and the ANIMATE noun will be the product of the grinding. This meaning is supplied by the motivation of 'ANIMATE as Grain/Grain Products' and the semantic core of the INANIMATE gender value. It is difficult to maintain gender as strictly inflectional in these noun pairs given the many shared characteristics with derivation.

In a compromise between the continuous and dichotomous approaches to inflection and derivation, some view it as a tripartite distinction (Booij, 1993; 1996). In the tripartite view of inflectional and derivational morphology, there is (canonical) contextual inflection, inherent inflection which shares characteristics with derivation, and derivation. Both contextual and inherent inflection are relevant to the syntax, but inherent inflection may also express new information, while contextual inflection expresses redundant information. Tense and aspect are considered contextual inflection for verbs. Structural cases, e.g. nominative, accusative and genitive, are examples of contextual inflection for nouns, while grammatical cases such as locative, ablative and instrumental are inherent inflection, since they contribute some independent information (Haspelmath and Sims, 2010:100-2).

Inflection may be contextual for one part of speech, and inherent for another. For example, number is inherent for nouns since it expresses independent information, but contextual for adjectives, verbs, etc. which simply agree with the noun. Similarly, gender is inherent for

nouns, but contextual for its agreeing targets. This accounts for why it is possible to glean independent information from gender, e.g. that a referent is feminine or animate, and that independent information may fuel the derivation of new nouns.

The strictly dichotomous view of morphology into inflection and derivation is untenable given the above data on the lexical recategorization of gender in Ojibwe, as well as cross-linguistically. Gender, just like noun classes, may participate in derivational processes, likely tied to the role of semantics in assignment. A continuous approach to the distinction between these types of morphology, or at least a tripartite approach which allows for certain instances of inflection to share characteristics with derivation, is more appropriate, especially as the designation of a particular grammatical feature as inflectional or derivational may vary for different parts of speech. Next, I discuss how the derivational characteristics of grammatical gender have been previously analyzed.

### 7.3.2 Lexical recategorization results in two separate nouns

The ability of gender to enter into derivational processes, and the issue this poses for a strict dichotomy between inflectional and derivational morphology, has mostly been bypassed by labeling such noun pairs as a single noun. Previously applied labels include double or multiple gender nouns (Corbett, 1991:67, 181-3) or, specific to Algonquian languages, nouns of dual animacy (Quinn, 2001:2) or variable animacy (Valentine, 2000:115).[6] Examples of lexical

[6] Nouns discussed under the label of 'multiple gender' are distinct from hybrid nouns, in that the former takes multiple consistent agreement patterns, while the latter may take differing agreements within the same sentence (Corbett, 1991:67, 183-4). The differing agreements are somewhat predictable based on the targets involved, which is Corbett's Agreement Hierarchy (Corbett, 1991:225-60).

recategorization of gender are presented as problematic nouns (Corbett, 1991:66-8), since a defining characteristic of gender systems is that each noun has a single gender value. This feature of gender systems is in contrast to classifier systems where a noun may be compatible with multiple classifiers. The evidence seems indisputable that we are dealing with two distinct nouns, rather than one, however, and they need not be labeled as problematic.

The analysis of such noun pairs as a single noun with indeterminate gender is plagued with inconsistencies. Canonical examples of supposed multiple gender nouns, also called common-gender nouns, are those in which the difference in meaning aligns with the semantic core. Corbett (1991:67, 181) offers the Archi noun *lo* that may be in gender I, II or IV, with the respective meanings of 'boy', 'girl' or 'young (of animal)', as well as the Lak noun *ħakin* 'doctor' that may be in genders I, II or III, depending on whether the doctor is a man, older woman, or younger woman, respectively. In both of these cases, the gender of the noun is motivated by semantic assignment and nothing out of the ordinary is taking place. Labeling such nouns as somehow exceptional introduces an unnecessary complication.

In a related example, French FEMININE *la trompette* 'the trumpet' and MASCULINE *le trompette* 'the trumpeter' are labeled as separate, but related, nouns by Corbett (1991:182), with the rationale that while the MASCULINE form is assigned via the semantic core of biological sex, the FEMININE form is not. The application of this criterion, i.e. that all meanings of a noun must be motivated by the semantic core in order to warrant the label of a multiple gender noun, may be inconsistent given that gender systems with semantic assignment may have heterogeneous assignment rules. By this logic, *Gichi-mookomaan* 'American' and *gichi-mookomaan* 'big knife' are separate nouns because their meanings align with the semantic core of animacy, but *ozaawaakizigan* 'a piece of toast' and *ozaawaakizigan* 'a toaster' are the same noun with

changeable gender. This would be despite the fact that for speakers of Southwestern Ojibwe ‘ANIMATE as Grain or Grain Product’ is one of the most salient motivations for gender assignment.

Further complicating the tenuousness of the analysis of a noun as ‘multiple gender’ are ‘motion nouns’, found in languages with overt gender marking, e.g. Spanish *hijo* ‘son’ and *hija* ‘daughter’.[7] Such nouns are clearly related and assigned via the semantic core of biological sex, so the label of multiple gender noun may be expected. Corbett (1991:67), however, labels these as separate nouns based on the rationale that they share a stem but have differing inflections, e.g. the MASCULINE ends in /-o/ and the FEMININE ends in /-a/. This is inconsistent because it has already been established that gender need not be marked on the noun. Noun pairs assigned via the semantic core should be labeled as separate nouns regardless of whether they have overt or covert gender marking, and noun pairs assigned via semantic assignment should be labeled as separate nouns, regardless of whether those semantics form the ‘core’ distinction or are more secondary.

Consider the relevant notions of polysemous nouns and homophonous nouns. Homophonous nouns are two nouns with the same phonological form and unrelated meanings. Their homophony is an accident of history. Corbett (1991:181) offers the examples of French FEMININE *la livre* ‘the pound’ and MASCULINE *le livre* ‘the book’. These are etymologically distinct, as the former derives from Latin *libra* ‘unit of weight’ and the latter from Latin *liber* ‘book, paper’. A polysemous noun, on the other hand, is a single noun with multiple related

[7] The label seems to make reference to the ability of the noun root to change, i.e. move, gender values.

meanings, e.g. English *man* may refer to an adult male of the human species, any male of the human species, or simply the human species.

Homophones are listed separately in dictionaries, while the different meanings of a polysemous noun are contained in a single entry. However, the sole difference is the degree of semantic relatedness, and etymological origins may become obscured, making the label of homophony more arbitrary than it first appears. For example, the English nouns *bank* 'financial institution' and *bank* 'land alongside a body of water' are today considered a classic example of homophones, but they both derive etymologically from Proto-Germanic **bankiz-* 'shelf'. Corbett (1991:67) labels Italian FEMININE *la porta* 'the door' and MASCULINE *il porta* 'the harbor' (currently pronounced *il porto*) as homophones, but these are etymologically related, too, derived from the Proto-Indo-European root **per-* 'to pass through, go forth, cross'. Likewise, Singer (2016:59) labels the Mawng (Non-Pama-Nyungen) MASCULINE *ja ngarlwak* 'the knee, shellfish' as two homophonous nouns, without comment on their potential relatedness. They could just as easily be labeled a single, polysemous noun since the angle of both knees and shellfish range from zero to 180 degrees and they both have rounded, concave outer shapes, e.g. *knee cap*.

Instances of lexical recategorization of gender are in between homophones and polysemes in that they are separate nouns, evidenced by differing gender values, but with related meanings. The arbitrariness of the distinction between homophony and polysemy, and the slippery slope of determining degrees of semantic relatedness, are entirely avoidable pitfalls when nouns are distinguished by differing gender values. They should simply be regarded as distinct nouns, since they are treated as such in the language.

To summarize, gender in Ojibwe is semantically motivated and this coincides with a heightened productivity of gender in derivational processes. Noun pairs, with one being derived

solely by a change in gender, should be regarded as two separate nouns, regardless of whether they are motivated by the semantic core and whether they have overt or covert gender marking. Thus, lexical recategorization of gender does not constitute an exception to the generalization that each noun has a single gender value. In the following section, I show how the framework of Construction Morphology is capable of formalizing lexical recategorization of gender.

### 7.3.3 Lexical recategorization in Construction Morphology

Booij (2010) brings the constructionist approach to morphology. Construction Morphology takes paradigms of related words as the basis for morphological analysis, hence deriving new words depends on abstractions over sets of existing words (Booij, 2010:3). A 'construction' is a pairing of form and meaning, shown through 'schemas', which are data structures representing these abstractions (Booij, 2010:5-6). Morphological schemas express predictable properties of existing complex words and indicate how new words can be derived (Booij, 2010:4).

An example schema, representing the English agentive /-er/, which is added to a verb to derive a noun, is shown below. The left side is a morpho-syntactic description, and on the right side, 'SEM' stands for a meaning component. The symbol ↔ represents a relation of correspondence between these different kinds of information (Booij, 2010:14). The 'X' in square brackets serves as the variable word form. Subscript capital 'V' and 'N' represent the part of speech as a verb and noun, respectively, and subscript lowercase letters co-index the properties on the left with those on the right.

(128) Agentive English /-er/

$[[X]_{V\,i}\text{er}]_{N\,j} \leftrightarrow [\text{SEM of one who } V_i\text{s}]_j$

This is compatible with semantic assignment and lexical recategorization of gender. Speakers generalize multiple semantic factors over a gender value based on sets of nouns that bear that value, represented as schemas, and use those schemas to coin new words.

The lexicon may be manifested as a hierarchy of types; at the top are very broad distinctions, such as syntactic categories, and at the bottom are more specific distinctions such as individual nouns (Booij, 2010:25). The notion of 'default inheritance' states that a particular property of a word is inherited from the dominating node unless otherwise specified in its lexical entry, allowing for the expression of an exceptional property (Booij, 2010:27-8). I co-opt this term to describe INANIMATE as the 'elsewhere' gender value (Dahlstrom, 1995:64; Quinn, 2001:1; Goddard, 2002:221-4), thus only semantic factors of the ANIMATE value need to be specified with a schema.

The schema in (129) captures the semantic core of the ANIMATE category, that of beings who possess animateness, while schema (130) captures that ANIMATE nouns, derived from INANIMATE ones, may also express the semantics of a proper name of an animate being.

(129) Animateness

$[X]_{N[+ANIMATE]i} \leftrightarrow [SEM \text{ include animateness}]_i$

(130) Onomastic

$[[X]_{N[-ANIMATE]i}]_{N[+ANIMATE]j} \leftrightarrow [SEM_i \text{ and SEM of proper name}]_j$

This approach allows for the creation of new lexical items through analogical extension between individual words, as well as schemas.[8] An example of this is shown with the animate noun *mkizin* in (131). The line connecting the ANIMATE and INANIMATE nouns represents the transfer of information. The semantic relatedness of the two nouns is shown through semantics from the INANIMATE noun forming part of the semantics of the ANIMATE noun, in addition to new semantic material as a result of the recategorization of gender (↑↓ $_{gender}$).

(131) Analogical Extension of Animate *mkizin* 'tire'

$[mkizin]_{N[+ANIMATE]j}$ ↔ [SEM $_{[\uparrow\downarrow\ gender]k}$ and new SEM]j

|

$[mkizin]_{N[-ANIMATE]k}$ ↔ $[shoe]_k$

Morphological constructions may carry specific, non-compositional meaning (Booij, 2010:10). In the animate noun *abwaajigan,* although there is no morpheme expressing the meaning of bread, it can be derived from the gender value. Since new words may be coined based on schemas or analogical extension, the meaning of *abwaajigan* could be demonstrated by referring to a schema that specifies grain/grain products as ANIMATE, or by analogical extension with the model word *bakwezhigan*. The latter is illustrated in (132).[9] The information on the right says that the semantics of the verb *abwaad*($_i$) combine with the semantics and gender value of the lexical item *bakwezhigan*($_k$) to provide both the gender and semantics of the derived noun ($_j$).

[8] Booij (2010:89) writes, "The implication of assuming a hierarchical lexicon with different levels of abstraction is that ... there is both analogical word formation, based on an individual model word, and word formation based on abstract schemas."

[9] Booij (2010:89) says, "Schemas are based on lexical knowledge, and this type of knowledge varies from speaker to speaker. Hence, speakers may also differ in the number and types of schemas that they deduce from their lexical knowledge."

(132) Analogical extension of ANIMATE *abwaajigan* ‘bread cooked over a fire’

$[[\text{abwaad}]_{Vi}\text{igan}]_{N[+\text{ANIMATE}]j} \leftrightarrow [\text{SEM}_i \text{ with SEM }_{[\text{gender}]k}]_j$

|

$[\text{bakwezhigan}]_{N[+\text{ANIMATE}]k} \leftrightarrow [\text{bread}]_k$

Construction Morphology provides a formalism to capture derivation of new lexemes via a change in gender, termed lexical recategorization, which may be motivated by semantic factors of gender assignment, shown with schemas, or by analogical extension between individual words. In the next chapter, I discuss how lexical recategorization in Algonquian languages has been interpreted as a formal link between grammatical gender and the count/mass distinction.

# CHAPTER 8

# GENDER, THE COUNT/MASS DISTINCTION AND NOMINAL ASPECT

## 8.1 Introduction to gender, the count/mass distinction and nominal aspect

In what follows, I put forth a novel analysis for Ojibwe of nominal aspect in the sense of Rijkhoff (1991, 2010), and show how this, in combination with semantic assignment, accounts for data that has led to claims that there is a formal link between grammatical gender and the count/mass distinction.

The count/mass distinction is the presence or absence of both count and mass nouns in a language. For example, English has count and mass nouns and therefore has the count/mass distinction, while Mandarin Chinese does not have count or mass nouns and therefore lacks the count/mass distinction. Nominal aspect refers to the linguistic representation of a property in space, similar to the way that verbal aspect refers to the representation of a property or relation in time (Rijkhoff, 1991:291). Nominal aspect includes the concepts of count and mass nouns, but it is not synonymous with the count/mass distinction, as it allows for more variety in spatial representation across and within languages.

In the example below, one way to interpret the meaning relation between the two nouns is that the INANIMATE one refers to a substance (mass), while the corresponding ANIMATE refers to an individuated portion of that substance (count).

(133) a. INANIMATE mass noun b. ANIMATE count noun

zhooniyaawaabik ‘silver’ zhooniyaawaabik ‘coin’

Wiltschko (2009; 2012) accounts for the pattern shown above by claiming that Blackfoot, and Algonquian languages more generally, do not have grammatical gender. She claims that the distinction encoded by the ANIMATE and INANIMATE values is really the functional equivalent of the count/mass distinction. In a more moderate proposal, Mathieu (2012a; 2012b) maintains that Algonquian languages have grammatical gender and accounts for the above pattern by positing a singulative system. A singulative system is one in which a mass noun undergoes recategorization of gender to create an individual (count noun), called the singulative form. He shows that Ojibwe has both gender and the count/mass distinction, and thus, the two cannot be functionally equivalent.

Further, Mathieu (2012a; 2012b) claims that the singulative system accounts for why certain mass-denoting nouns can be pluralized in Ojibwe, since one of the main diagnostics to identify mass nouns is resistance to pluralization. An example is given below.

(134) a. mandaamin ‘corn, a kernel of corn’ b. mandaamin-ag ‘kernels of corn’

My proposal is twofold: first, addressing the pattern shown in (133), I maintain that grammatical animacy is a gender distinction and the pattern is explainable solely on the basis of semantic assignment in the gender system. Contra Wiltschko (2009; 2012), this pattern is not because animacy is equivalent to the count/mass distinction, and contra Mathieu (2012a; 2012b), it is not because the language embeds a singulative system. A consequence of semantic factors motivating assignment is that gender may participate in derivational processes, as previously described.

Second, addressing the ability of certain mass-denoting nouns to pluralize in Ojibwe, I propose this is due to the presence of a third type of nominal aspect, in addition to count and

mass nouns. This third type of nominal aspect is called ‘general’ by Rijkhoff (2010). It is a flexible type, meaning the spatial specifications can alternate between those of count and mass nouns. Contra Mathieu (2012a; 2012b), pluralization of certain substance-denoting nouns is not because of a singulative system which formally links nominal aspect and gender. Nominal aspect and gender are separate devices of nominal classification, evidenced by gender values cutting across all types of nominal aspect.

In the following sections, I introduce the apparent connection between gender and nominal aspect by examining the analyses of Wiltschko (2009; 2012) and then Mathieu (2012a; 2012b), before offering an alternative and evidence of disjunction between the two forms of noun categorization.

### 8.2 The claim that Algonquian languages do not have grammatical gender

Wiltschko (2009) claims that Blackfoot, and Algonquian languages generally, do not have grammatical gender. She further claims that what is labeled as grammatical gender in Algonquian languages is the structural equivalent of the count/mass distinction, which she also refers to as boundedness, i.e. count nouns are bounded, while mass nouns are not. Her arguments include the supposed complementary distribution of boundedness and grammatical animacy, evidence from nominalizers, and lexical recategorization of gender. Wiltschko (2009:228) writes,

> The first argument is a typological one. We observe that in the (admittedly limited) sample of languages under consideration, animacy and boundedness are in complementary distribution, while gender and boundedness are not. Taking complementarity to be the hallmark of identity as in the structuralist tradition (see also Borer 2005) we have a first argument against animacy as a form of gender.

This complementarity is visualized in Table 18 (Wiltschko, 2009:223), shown below. The sample size is too small to prove a complementary distribution of animacy and boundedness, nor is it clear how such a distribution is relevant for determining whether Algonquian languages have grammatical gender. It begs the question to claim complementary distribution of animacy and boundedness, given the organization of the table, and then that it shows animacy must be the count/mass distinction and cannot be gender. Following this logic, one could equally claim that animacy and gender are in complementary distribution, and thus animacy must be gender and cannot be the count/mass distinction.

Table 18. Comparison of nominal classification in Blackfoot, English and German

| | **Blackfoot** | **English** | **German** |
|---|---|---|---|
| **Mass/Count** | x | ✓ | ✓ |
| **Animacy** | ✓ | x | x |
| **Gender** | x | x | ✓ |

The second argument put forth to deny the label of grammatical gender in Algonquian languages is that nominalizing suffixes are specified for gender in German, but not in Blackfoot. This is simply due to differing assignment mechanisms, i.e. largely formal in German and semantic in Blackfoot. In Ojibwe, too, most nominalizers are not specified for gender, including /-n/, /-gan/ and /-aagan/. The only other nominalizer, /-win/, is specified as INANIMATE (Valentine, 2001:505-7). It is unclear how this mixed bag of specified and unspecified nominalizers would be accounted for in Wiltschko's approach. Valentine (2001:502) writes,

> The grammatical gender of nouns derived by the addition of a nominalizer is determined by the semantic properties of their referents, that is, by general conventions of animacy in Nishnaabemwin.

Implicit in this argument is the assumption that gender assignment may only be based on formal criteria, which is categorically false.

It is also claimed that evidence from the German suffix /-in/, which derives female-denoting occupations from traditionally male ones and thus triggers a change from a MASCULINE noun to a FEMININE one, shows that the gender value is determined by the suffix rather than the root. This is a strawman argument, since gender is a feature of nouns, rather than roots, which are category-neutral concerning part of speech (Marantz, 1997; as cited in Acquaviva, 2009). The claim that this is evidence that gender assignment comes from the suffix could easily be argued against by asserting the primacy of semantic assignment and the redundancy of the formal marking.

Moving on to the final argument made against grammatical gender in Algonquian, it is claimed that nouns may have two animacy values in Blackfoot, but nouns in German may have only one gender value. Wiltschko (2009:7- 8; 2012:166) writes,

> There are no German nouns that are associated with two distinct genders and still related in meaning. If a given form has two possible genders associated with it, it is for one of the following two reasons. We are either dealing with accidental homophony or else gender is in free variation and does not correlate with a meaning difference.

As discussed in the previous chapter, this is not an argument against the designation of gender in Algonquian languages, as it is more parsimonious to regard such instances as separate nouns, and this derivational function of gender is attested in a wide variety of languages. Nouns with identical forms, different genders and related meanings exist even in German. Some examples were provided in 7.3.1 and are repeated below (135). The fact that lexical recategorization of gender has been presented as an argument that Algonquian languages do not have gender underscores the need to have a consistent approach to the analysis of such noun pairs.

(135) a. MASC der See
‘the lake’

b. FEM die See
‘the sea’

c. MASC der Erbe
‘the heir’

d. NUT das Erbe
‘the inheritance’

e. MASC der Ekel
‘the revulsion’

f. NUT das Ekel
‘the obnoxious person’

g. MASC der Pack
‘the stack, pile’

h. NUT das Pack
‘the package’

In claiming that animacy in Algonquian is structurally equivalent to the count/mass distinction, supposedly accounting for examples like that in (133), Wiltschko (2009:234) says that functional categories may be associated with different substantive content. In other words, the claim is that the count/mass distinction and animacy are hosted in the same structural position, but differ in that the content of that position in Algonquian languages is [±animate], while in German or English, it is [±bounded]. This is strange, though, as the argument made is actually that the content of this structural position in Algonquian languages may be both [±animate] and [±bounded], as Wiltschko (2009:232) provides the following piece of Meskwaki data as evidence that animacy behaves like the count/mass distinction, claiming it is compatible with the analysis of structural identity.

(136) a. Inanimate/Unbounded
owiiyaasi
‘meat, flesh’

b. Animate/Bounded
owiiyaasa
‘cut or piece of meat’ [Goddard, 2002:213]

The arguments against Algonquian languages having grammatical gender are unfounded. Conspicuously absent from these proposals about how noun categorization is universally structured, and which claim to arbitrate the designation of gender, is an explicit definition of gender. While it may be true that Blackfoot does not grammaticize a count/mass distinction as English or German do, it does have gender. Gender in Blackfoot is not exactly like gender in German, but there is agreement shown in demonstratives and verbs, so it is like German gender in the relevant, defining characteristic. Animacy cannot be analyzed as competing for the same structural position as the count/mass distinction because Ojibwe exhibits both forms of noun categorization (Mathieu, 2012a). Mathieu (2012a; 2012b) holds that animacy is a gender distinction in Ojibwe, and proposes that gender and the count/mass distinction interact through a singulative system, to be discussed next.

### 8.3 The claim that Ojibwe has a singulative system

Ojibwe has both grammatical gender and a count/mass distinction, the latter of which is evidenced by a lack of pluralization on certain nouns (Valentine, 2001:182; Mathieu, 2012ab). Examples of mass nouns are given in the table below. They are found in both genders.

Table 19. Southwestern Ojibwe mass nouns

| Gender | Singular noun | Gloss | *Plural |
|---|---|---|---|
| INANIMATE | agajiwin | ‘shame’ | *agajiwin-an |
| INANIMATE | bimide | ‘oil’ | *bimide-n |
| INANIMATE | doodooshaaboo | ‘milk’ | *doodooshaaboo-n |
| INANIMATE | miskwi | ‘blood’ | *miskwi-n |
| ANIMATE | waabigan | ‘clay’ | *waabigan-ag |

Table 19. Southwestern Ojibwe mass nouns, continued

| | | | |
|---|---|---|---|
| ANIMATE | giizhig | ‘sky’ | *giizhig-ag |
| ANIMATE | goon | ‘snow’ | *goon-ag |
| ANIMATE | zhooniyaa | ‘money’ | *zhooniyaa-g |

In a singulative system, a mass noun undergoes recategorization of gender to create a portion of that mass, called the singulative form. This singulative form, as a count noun, can then be pluralized. Mathieu (2012a; 2012b) says singulative systems are attested in Breton, Welsh, Arabic, and Dagaare. The following table shows mass and singulative nouns in the Celtic language of Breton (Trépos, 1980:67; as cited in Mathieu, 2012b:654).

Table 20. Mass and singulative nouns in Breton

| **Gender** | **Mass noun** | **Gender** | **Singulative noun** |
|---|---|---|---|
| MASCULINE | geot<br>‘grass’ | FEMININE | geot-enn<br>‘blade of grass’ |
| MASCULINE | plouz<br>‘straw’ | FEMININE | plouz-enn<br>‘wisp of straw’ |
| MASCULINE | ed<br>‘wheat’ | FEMININE | ed-enn<br>‘stalk of wheat’ |
| MASCULINE | louzou<br>‘weeds’ | FEMININE | louzou-enn<br>‘blade of weed’ |
| MASCULINE | douar<br>‘earth’ | FEMININE | douar-enn<br>‘plot, terrier (survey of land)’ |
| MASCULINE | erc’h<br>‘snow’ | FEMININE | erch’enn<br>‘piece of snow’ |
| MASCULINE | dir<br>‘steel’ | FEMININE | dir-enn<br>‘lighter’ |
| MASCULINE | dour<br>‘water’ | FEMININE | dour-enn<br>‘drop of water’ |

Table 20. Mass and singulative nouns in Breton, continued

| | | | |
|---|---|---|---|
| MASCULINE | glav<br>‘rain’ | FEMININE | glav-enn<br>‘drop of rain’ |

He proposes that Ojibwe, and possibly other Algonquian languages, have a singulative system whereby INANIMATE mass nouns recategorize to ANIMATE to become count, as in (133). The Ojibwe data he presents is shown in Table 21.

Table 21. Ojibwe nouns potentially showing singulative pattern

| **Gender** | **Mass Noun** | **Gender** | **Singulative Noun** |
|---|---|---|---|
| INANIMATE | zhoonya<br>‘money’ | ANIMATE | zhoonya<br>‘coin’ |
| INANIMATE | mitig<br>‘wood’ | ANIMATE | mitig<br>‘tree’ |

The biggest issue with concluding that Ojibwe has a singulative system is the lack of supporting data. While the above two noun pairs seem to show the INANIMATE/mass > ANIMATE/count pattern, they are not uniformly glossed this way across dialects. While in the Southwestern dialect, terms for money are ANIMATE, Valentine (2001:116-7) reports that in the Eastern and Odawa varieties, terms for money are INANIMATE. These are the same varieties on which Mathieu bases his analysis (2012b:651). He acknowledges Valentine’s position, but seems to mischaracterize it, writing in a footnote (2012b:665):

> According to Valentine (2001:116–117), while in most Ojibwe dialects all terms for money are animate, in Nishnaabemwin (Ojibwe, Odawa) they are consistently inanimate in the singular, but not in the plural, the latter being listed in dictionaries as animate. The term ‘money’ also clearly takes the animate plural -ag (the inanimate plural being -an). The singular term *mitig* ‘wood’ is also listed as inanimate in

> dictionaries, but its pluralized counterpart is listed as animate (and it surfaces with the animate plural, -oog being an allomorph of -ag).

What Valentine (2001:116-7) actually says is that all terms for money are INANIMATE in these dialects, except for one noun, *zhoomaankensag* 'small change', shown with the ANIMATE plural ending /-ag/. He makes no mention of singular or plural as a factor. It is unclear to which dictionaries Mathieu refers when he asserts that money terms are INANIMATE in the singular, but not in the plural. For example, Rhodes' (1993:401) dictionary of the same varieties provides only the INANIMATE singular form *zhoon'yaa* 'money' with no corresponding plural, and no form is supplied for 'coin'. In the Southwestern dialect, documented in the Nichols and Nyholm (1995) dictionary and the Ojibwe People's Dictionary, all money terms are ANIMATE whether they refer to a mass/collective or pluralizable count noun, e.g. *zhooniyaa* 'money' (no plural possible) and *zhooniyaawaabik*(*-oog*) 'coin(s)'. As noted earlier in section 7.3, the corresponding INANIMATE nouns for both of these has the mass meaning 'silver'. In the Freelang (2003) dictionary, which combines entries from a vast amount of dictionaries and word lists across dialects, there are INANIMATE and ANIMATE entries for both 'money' and 'coins'.

The situation is similarly not as clear for *mitig*, of which Mathieu (2012b:665) writes, "it is listed in dictionaries as inanimate when it is interpreted as 'wood/forest' but as animate when it means 'tree'." None of the above dictionaries listed 'forest' as an INANIMATE meaning for *mitig*, instead supplying *mitigwaaki* or *mitigwaki*. The ANIMATE form is invariably 'tree' across all dialects. In Rhodes' (1993) dictionary, INANIMATE *mitig* means 'piece of wood', in Freelang (2003) it is 'wood, stick', and in the Ojibwe People's Dictionary it is 'wood, a piece of wood, a stick'. In summary, it likely does have the mass meaning of 'wood', but it likely also contains the equivalent count meaning 'piece of wood, stick' in its lexical entry, sans recategorization. Even

if the pair INANIMATE *mitig* 'wood' > ANIMATE *mitig* 'tree' is interpreted as showing the INANIMATE/mass > ANIMATE/count pattern, this is one example.

Mathieu provides more data showing the singulative pattern from Meskwaki than from Ojibwe. This data is presented below (Goddard, 2002:213).[1]

Table 22. Meskwaki Nouns Showing Singulative Pattern

| **Gender** | **Mass noun** | **Gender** | **Singulative noun** |
|---|---|---|---|
| INANIMATE | shooniyaahi<br>'silver, money' | ANIMATE | shooniyaaha<br>'a coin, a bill' |
| INANIMATE | miichipeehi<br>'game' | ANIMATE | miichipeeha<br>'a game animal' |
| INANIMATE | owiiyaasi<br>'meat, flesh' | ANIMATE | owiiyaasa<br>'a piece/cut of meat' |
| INANIMATE | owiinenwi<br>'fat (generic)' | ANIMATE | owiinenwa<br>'a piece of fat' |
| INANIMATE | anakeehkwi<br>'bark' | ANIMATE | anakeehkwa<br>'a piece of bark' |

The Meskwaki data is presented as evidence that gender, and simultaneously the singulative, is present in nouns of the Algonquian family, presumably because Ojibwe singular nouns have covert gender. Mathieu (2012b:664) notes,

> It is evidently difficult to notice the gender shift that is the spell-out of the singulative in Ojibwe. This is because most singular inanimate nouns in Ojibwe have lost their final -i and most animates have lost their final -a.

Mathieu (2012b:665) also writes,

> For most singular nouns, however, especially those that end with a consonant, it is

[1] The noun forms as presented in Mathieu (2012a) use a different orthography from Goddard (2002). The forms in the table here use the same orthography as Mathieu. A few forms have been corrected for spelling.

> impossible to tell whether they are animate or inanimate from the endings, creating a situation where the singulative is not morphologically visible. In addition, because some words have lost their final -i together with final consonants, inanimate nouns can end in -a, which is the mark for animates rather than inanimates (and vice versa).

He (2012b:669) again notes this,

> In fact, this [singulative] system is probably very old and must have been in competition with the classifier system for a long time. The singulative system is still fairly productive, but often not visible for independent reasons (loss of final vowels like -i and -a; see section 2).

While it is true that Ojibwe has covert gender on singular nouns, it is not necessary to refer to Meskwaki, since the gender value of every noun in Ojibwe is clearly visible through the agreements shown on verbs and demonstratives, which Mathieu acknowledges (2012b:666). Overt marking on nouns is not a requirement for gender, nor is it needed to ascertain whether a singulative pattern is present. Since the morphological reflex of the singulative is simply (recategorization of) gender, it is odd that there is so much explication on why the singulative is not visible. It is not the case that recategorization of gender and thus the singulative is hard to notice, rather, that recategorization is simply not present.

Further, Mathieu (2012b:661, 669) claims that Ojibwe lacks productive classifiers, though he does not distinguish mensural from sortal classifiers, and also lacks measure terms, e.g. ‘piece of’ or ‘portion of’. He proposes that the singulative serves the individuating function in their lack of productivity or absence. As discussed in sections 3.4 and 6.3.3, sortal classifiers do seem to be fading from use, but mensural classifiers are very productive. The reason Ojibwe does not require generic measure terms is that a combination of particular numerals and verbs are used to express this information. The numerals are called ‘repetition numbers’ by Valentine (2001:877-9), used to indicate reiteration or repetition. They are formed by adding the final /-ing/ to numeral roots. In the Odawa/Eastern Ojibwe examples below, the repetition number for ‘one’

occurs with the VAI *nikzod* ‘be cut in a certain way’ to express meanings for which English employs a measure term.

(137) a. ngoding **nikzod** kosmaan
once cut.in.a.certain.way.VAI.3.SG.CONJ pumpkin
‘one piece of pumpkin’

b. ngoding **nikzod** bkwezhgan
once cut.in.a.certain.way.VAI.3.SG.CONJ bread
‘one slice of bread’

Lastly, the INANIMATE/mass > ANIMATE/count pattern does not account for the vast majority of nouns which show lexical recategorization, e.g. Ojibwe INANIMATE *ataadiwin* ‘a gambling game, a wager’ and ANIMATE *ataadiwin* ‘a playing card’. It is also not clear how the singulative pattern fits into the system of gender assignment described here, originating from a combination of the semantics of animacy and sortal classifiers. It is similar to taxonomic effects, as noted in section 6.3.2, as well as the ‘ANIMATE as Specific (Inanimate as Generic)’ pattern shown in section 7.3, but not identical. It is more efficient to account for noun pairs such as (133), as well as those that do not fit the pattern of count/mass, with a gender system and semantic assignment than by structural identity of animacy and the count/mass distinction or a singulative system.

While true mass nouns in Ojibwe resist pluralization, certain other mass-denoting nouns do have plural forms. Such nouns are couched as further evidence of a singulative system by Mathieu, though they do not show recategorization of gender, which could be the underlying motive to cast the singulative as invisible. These nouns are at the heart of the proposal for the

singulative, since their existence may lead some to claim that number is not inflectional. The background is that Wiltschko (2012) concludes from her work on Halkomelem Salish that number is not inflectional in that language. She claims this explains why there is systematic pluralization of all nouns, including substance-denoting nouns, and no formal count/mass distinction. Mathieu (2012a:174-83) shows that number is inflectional in Ojibwe, but says this leaves a puzzle as to why certain mass-denoting nouns can be pluralized and denote a count reading (2012a:175), which he claims is accounted for by the singulative. The following are examples of the sort of nouns referenced, sourced from the Southwestern dialect.[2]

Table 23. Southwestern Ojibwe Nouns with Ambiguous Singular Meanings

| Gender | Noun | Singular meaning | Plural meaning |
|---|---|---|---|
| ANIMATE | wanagek(-wag) | 'bark, piece of bark' | 'pieces of bark' |
| ANIMATE | mandaamin(-ag) | 'corn, kernel of corn' | 'kernels of corn' |
| ANIMATE | mikwam(-iig) | 'ice, chunk of ice' | 'chunks of ice' |
| INANIMATE | mishi (mis-an) | 'firewood, log of firewood' | 'logs of firewood' |
| INANIMATE | aasaakamig(-oon) | 'moss, piece of moss' | 'pieces of moss' |
| INANIMATE | mitig(-oon) | 'wood, piece of wood, stick' | 'pieces of wood, sticks' |

[2] While this phenomenon seems common to all dialects of Ojibwe, variation exists so that the nouns referenced by Mathieu are slightly different than those given in the table. For example, his data lists *waabigan* 'clay' and *asemaa* 'tobacco' with plural forms, but they do not appear in the dictionaries I referenced with plural forms.

The above nouns are ambiguous between mass and count readings in the singular and are disambiguated in the plural; only the count reading is available.[3] They are both ANIMATE and INANIMATE and show no recategorization of gender from the singular to plural. In fact, the majority of the data provided by Mathieu (2012a:666-7, 2012b:184) in favor of a singulative system do not recategorize. Somewhat curiously, he presents the following data and accompanying explanation.

(138) a. maandaamin 'corn' ~ maandaamin-ag 'pieces of corn'

b. semaa 'tobacco' ~ semaa-g 'chunks of tobacco'

c. mikwam 'ice' ~ mikwam-iig 'pieces of ice'

d. mnoomin 'rice' ~ mnoomin-ag 'grains of rice'

e. mashkosiw 'grass' ~ mashkosiw-ag 'blades of grass'

f. waabigan 'clay' ~ waabigan-ag 'bits of clay'

> We can now see why mass terms can be systematically pluralized in Ojibwe. It is not because the language lacks a grammaticized count/mass distinction, but because in these cases, a gender shift process has operated on the singular to give a plural that is of a different gender from the original mass noun (this is typical of singulative systems). We can also understand why *mikwam* can mean 'ice' or 'piece of ice'. There is a gender shift from *mikwam* as mass noun to *mikwam* as unit of measure, although it is no longer spelled out morphologically.

This explanation is misleading because the mass nouns in these examples, as well as the plurals, are all ANIMATE. There is no recategorization of gender. If the singulative process occurred, the recategorization of gender would be visible in the singular forms through the agreements they take with verbs and demonstratives. This information is also available in dictionaries. Five more

[3] Wiltschko (2009:231) notes that German also has such nouns, which are ambiguous between mass and count readings in the singular, writing "When pluralized, these nouns must be interpreted as denoting bounded individuals."

examples, also not showing recategorization but of the INANIMATE gender, are presented in a footnote with the accompanying explanation (2012b:666).

> As shown in (i), it is possible for certain mass nouns to be pluralized with a unit-of-measure reading, even though they are inanimate. These examples show that the singulative system is no longer fully productive morphologically. Some mass terms tend to remain inanimate when pluralized. It must be noted, however, that there is extreme dialectal variation. For example, in some dialects the plural of 'rice' is animate while in others it is inanimate.
>
> (i) a. (a)ki 'earth' ~ (a)ki-in 'bits of earth'
>
> b. azhashki 'mud' ~ azhashki-in 'chunks of mud'
>
> c. bkwezhgan 'bread' ~ bkwezhgan-an 'pieces of bread'
>
> d. aasaakamig 'moss' ~ aasaakamig-oon 'bits of moss'
>
> e. ziinzibaakwad 'sugar' ~ ziinzibaakwad-oon 'pieces of sugar'

He comments that this may be due to the loss of the singulative, but in light of this, it may be helpful to ask whether another explanation exists for this set of nouns that are ambiguous between mass and count readings in the singular and are disambiguated as count in the plural. I propose that this set of nouns are not mass nouns at all, but a separate type of nominal aspect.

## 8.4 Nominal aspect in Ojibwe

Rijkhoff's (1991, 2010) work on nominal aspect is broader than the count/mass distinction. He distinguishes six types of nominal aspect across the world's languages, four of which are rigid (sort, mass, singular object and collective) and two of which are flexible (general and set). The singular object is the equivalent of a count noun. The different types arise from specifications of the features of shape and homogeneity.

Figure 11. Rijkhoff's flexible and rigid types of nominal aspect

<table>
<tr><th></th><th>-Homogeneity</th><th>+Homogeneity</th></tr>
<tr><td rowspan="2">-Shape</td><td colspan="2">General</td></tr>
<tr><td>Sort</td><td>Mass</td></tr>
<tr><td rowspan="2">+Shape</td><td colspan="2">Set</td></tr>
<tr><td>Singular Object</td><td>Collective</td></tr>
</table>

The third type of nominal aspect identified here for Ojibwe is one of the flexible types, i.e. a 'general' noun, characterized as not having a definite outline. Rijkhoff (2010:735) says that "a general noun can be used to refer to, for example, a single concrete object or to a mass entity." This type of nominal aspect is found in languages with classifiers, such as Ojibwe, further supporting this analysis. In (139), examples of general nouns in Yucatec Maya are shown (Lucy, 2000: 329). In each, the noun may be interpreted as a single concrete object, or the mass, e.g. (139a) could be a single banana fruit or the substance of banana fruit.

(139) a. 'un-tz'íit há'as 'one 1-dimensional banana (i.e. the fruit)'

b. 'un-wáal há'as 'one 2-dimensional banana (i.e. the leaf)'

c. 'un-kúul há'as 'one planted banana (i.e. the plant/tree)'

To summarize, nouns in Ojibwe may be categorized with respect to nominal aspect in at least three ways; nouns of both ANIMATE and INANIMATE gender values may be of singular object (count), mass or general nominal aspect. The following tables show that these three types of nominal aspect cut across both gender values.

Table 24. Three types of nominal aspect with ANIMATE gender

| Number | Singular object | Mass | General |
|---|---|---|---|
| Singular | zhooniyaawaabik<br>‘coin’ | giizhig<br>‘sky’ | wanagek<br>‘bark, piece of bark’ |
| Plural | zhooniyaawaabik-oog<br>‘coins’ | * | wanagek-ag<br>‘pieces of bark’ |
| Singular | bineshiinh<br>‘bird’ | goon<br>‘snow’ | mandaamin<br>‘corn, kernel of corn’ |
| Plural | bineshiin-yag<br>‘birds’ | * | mandaamin-ag<br>‘kernels of corn’ |

Table 25. Three types of nominal aspect with INANIMATE gender

| Number | Singular object | Mass | General |
|---|---|---|---|
| Singular | mookomaan<br>‘knife’ | miskwi<br>‘blood’ | mishi<br>‘log of firewood, firewood’ |
| Plural | mookomaan-an<br>‘knives’ | * | mis-an<br>‘logs of firewood’ |
| Singular | makak<br>‘box’ | azhashki<br>‘mud’ | aasaakamig<br>‘moss, piece of moss’ |
| Plural | makak-oon<br>‘boxes’ | * | aasaakamig-oon<br>‘pieces of moss’ |

In conclusion, animacy in Ojibwe is a gender system with semantic assignment. This assignment mechanism enables lexical recategorization. Rather than explain the rare pattern of INANIMATE as mass nouns and ANIMATE as count nouns by formalizing it in relation to gender, whether through structural identity or a singulative system, it is more accurate to characterize this pattern using semantic assignment. Nouns that may alternate between count and mass in the singular and are only count in the plural represent a third type of flexible nominal aspect, called

‘general’ nouns. Gender and nominal aspect are separate noun categorization devices, evidenced by nominal aspect cutting across gender values.

# CHAPTER 9

# CONCLUSION

## 9.1 The function and semantics of gender and classifiers in Ojibwe

Aikhenvald (2000: 271-4) states that the semantic parameters of noun categorization devices can be broadly organized into three types: animacy, physical properties and function. These parameters are listed in the table below. Aikhenvald uses animacy as a cover term not just for the distinction of animate/inanimate, but also human/nonhuman, biological sex, kinship, and social status. Animacy and biological sex are the distinctions found most often in gender systems, but we have seen that other distinctions may be present, as well, especially when gender values are heterogeneous due to the influence of a classifier system. Physical properties of shape, dimensionality, etc. correspond to sortal classifiers, while the last two physical properties of arrangement and quanta correspond to mensural classifiers. It should also be noted that these semantic parameters may also be combined, e.g. dimensionality and shape together.

It has been illustrated here that Ojibwe has gender and several types of classifiers. Gender, like classifiers, is semantically assigned, and while it is predominantly inflectional, it may participate in derivational processes. Classifiers in the language are of the numeral and verbal types, which overlap in their inventories, but are not identical. Of numeral classifiers, there are both sortal and mensural ones. Verbal classifiers consist of suffixes which categorize an argument or non-argument of the verb based on its physical properties.

Table 26. Semantic parameters of noun categorization devices

| Broad type | Finer distinction | Examples |
|---|---|---|
| Animacy | animateness, humanness, biological sex | human, animal, male, female, kinship, social status, inanimate |
| Physical Property | shape | round, irregular |
| Physical Property | dimensionality | long, flat, spherical |
| Physical Property | directionality | horizontal, vertical |
| Physical Property | interioricity, boundedness | rings/holes, flat tortillas/flat plains |
| Physical Property | size | small, large |
| Physical Property | consistency | flexible, rigid |
| Physical Property | state | liquid, solid |
| Physical Property | material | wood, metal |
| Physical Property | inherent nature | canoe, house, plant, book |
| Physical Property | arrangement | coil, string of objs, pair |
| Physical Property | quanta | cluster, set, flock |
| Function | specific uses for obj., actions performed on obj. | transportation, domesticated, edible, plantable |

Classifiers in Ojibwe include the mensural distinctions of arrangement and quanta, while sortal classifiers include distinctions of at least dimensionality, shape, consistency and material. Aikhenvald (2000:275, 317) says the sortal classifier and referent may have one of two semantic relationships. The first is that of generic-specific, where the classifier identifies a superordinate category of which the referent is a subordinate member, also called kind classifiers (Aikhenvald, 2000:317). Kind classifiers are more likely to be semantically redundant. Second, the classifier

can be chosen according to properties of the referent, also called quality classifiers (Aikhenvald, 2000:317). The latter is found in Ojibwe.

The semantics of the gender system in Ojibwe are heterogeneous, composed of the combination of semantics found in the sortal classifiers and the semantic core of animacy, i.e. specifically animate/inanimate. As there are only two gender values, they may be interpreted as encoding similarities between referents of nouns with the same gender value, and likewise, encoding differences between referents of nouns with opposite gender values. This contrastive use of gender assignment must be consistent with the existing semantic motivations of assignment. The semantics of gender have undergone further divergence as analogical extension has played a role in assignment, leading to the reanalysis of semantic motivations into seemingly unrelated clusters, e.g. cars, drums, pipes, beads, etc. It remains to be seen how future generations of speakers may alter the system to impose more transparency.

In contrast to the gender system, sortal classifiers lack distinctions based on animateness. That is, sortal classifiers refer exclusively to properties of inanimate referents, and are incompatible with animate referents as shown in section 3.3, e.g. **bezhigwaabiig gnebig* ‘one (1D, flexible) snake’. Mensural classifiers, on the other hand, are compatible with both inanimates and animates, e.g. *ngodaabaan Nishnaabeg* ‘one carload of Nishnaabeg’.

Verbs are the core of Ojibwe. It makes sense, then, that the verbal classifier system would outlast the (sortal) numeral classifier system in frequency of use and productivity. We see this in the larger inventory of verbal classifiers, as well as the life some bound morphemes continue to live as verbal classifiers after ceasing to be numeral classifiers. A single origin for both classifier types may not be the whole story, however, for there are differences in their inventories that go beyond present for verbal classifiers and absent for numeral ones, e.g. /aak/ versus /aatig/.

Additionally, some aspects of language change may never be completed. A single synchronic snapshot in time may only reveal the system at various stages of change, ongoing and productive or frozen and unproductive. It was shown that the boundary between verbal classifiers and noun incorporation may be less than rigid, consistent with the conclusions of Biedny, et. al. (in press), which reviewed verbal classifier data from across the Algonquian family. They write,

> We suggest that what we have reported as descriptions of 'classifiers' actually show a set of originally incorporated nouns in wildly varying stages of grammaticalization. On one end we have the 'wood' and 'stringlike' forms, which most of the languages have generalized well into the classifier stage. On the other end we have 'grass' and 'leaf', which show a very narrow range of possible referents in most of the languages, but apparently have started down the path to classifier status in Munsee and Kickapoo.

Regardless of the various stages of grammaticalization of verbal classifiers, or of various stages of productivity in numeral classifiers, the function of both gender and classifiers may be described as providing information about referent types or kinds, informed by the coherent system of semantics, as well as reference-tracking. Both gender and classifiers participate in specifying reference, either supplementing or highlighting the meaning of the noun, and are thus, partly derivational. Example (140), showing different classifiers occurring with the same noun, *biiwaabik* 'metal', illustrates this ability with classifiers, and (141), showing the ANIMATE/INANIMATE noun pair for the form *ozhiga'igan*, illustrates it with gender.

| | | | | |
|---|---|---|---|---|
| (140) | a. bezhigw-**aatig** | biiwaabik | b. bezhigw-**eg** | biiwaabik |
| | one-1D.rigid.CL | metal.IN | one-2D.CL | metal.IN |
| | 'one metal rod' | | 'one metal sheet' | |

(141) a. **o'ow** ozhiga'igan b. **wa'aw** ozhiga'igan

this.IN faucet.IN this.AN tapped.tree.AN

'this faucet' 'this tapped tree'

## 9.2 Areas for further research

Fortunately or unfortunately for researchers and language learners interested in this area of study, there is more work to be done on the topic of noun categorization in Ojibwe. It is my hope that the work presented here sheds light on the individual descriptions of classifiers and of gender, and the relation between these two systems of noun categorization. There is more work to be done specifically on the relation between noun incorporation and classifiers. Just as we have seen that classifiers may serve as a source for gender, or at the very least, exert a semantic influence, noun incorporation may serve as an intermediary step between nouns and the development of classifiers (Mithun, 1986).

Another area for future research is whether classifiers may show effects of definiteness, specificity or discourse functions. It was noted here that they may be used anaphorically in Ojibwe, although other effects, e.g. foregrounding or backgrounding, may be relevant. Textual analyses may provide some insight, but topically oriented, yet natural conversation, as well as further elicitation fieldwork will likely prove more fruitful, due to the rarity of sortal classifiers in everyday speech.

Further, as noted in section 6.3.6, while the analysis proposed in this dissertation for the gender assignment of notional inanimates to the ANIMATE category seems to work well for Ojibwe, it remains to be seen whether this will prove a fruitful line of research for other Algonquian languages having similarly 'exceptional' nouns and classifier systems. Certainly, the

data reported in Biedny et. al. (in press) is a big step toward this investigation. While their research reveals that many classifier forms and/or semantics are shared across Algonquian languages, there are differences, too. For example, Ojibwe does not seem to have a classifier for 'hole' as identified in Munsee and Penobscot. Perhaps further research could refine even the inventories shared here. Which classifiers are shared, lost in some languages or branches of the family, and which are innovations? Answers to these questions, as well as larger studies looking at variation in gender assignment synchronically and diachronically, may provide a better idea of the origins of the classifier and gender systems found throughout the Algonquian languages.

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