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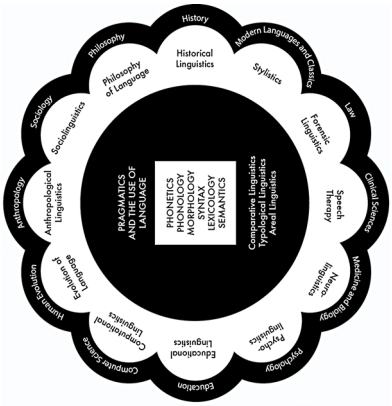
The Interdisciplinary Linguistics Program (ILP) at the University of Winnipeg (UW)

Prominence Hierarchies and Direct Inverse System in Ojibwe

Aandeg Muldrew, Major in Linguistics



LINGO

There are many systems in languages explained by prominence hierarchies relating to matters of alignment, the patterns languages use to mark and distinguish core arguments (Lockwood and Macauley 432). Prominence hierarchies present a useful tool to frame these patterns of grammatical relations observed across languages that are suggested to rest on some underlying "cognitive/functional" foundation (Lockwood and Macauley 438). In Ojibwe, the prominence hierarchy underlies many features of verbal inflection and alignment relating to the direct/inverse system.

The study of alignment is concerned with how core arguments, SAO, are marked morphosyntactically. (Lockwood and Macauley 2). Some languages also utilize a split system in which nominative alignment is used in one realm and ergative in another. Which system is used can be determined by tense/aspect/mood, main vs subordinate clause, or based on the prominence hierarchy (Lockwood and Macauley 432). Elements more animate on the hierarchy end up using the nominative/accusative system while less animate elements use ergative/absolutive (Lockwood and Macauley 2). Another pattern of alignment effected by the prominence hierarchy is differential object marking. Direct objects higher on the prominence hierarchy are marked overtly while those lower are not.

The Prominence hierarchy has appeared in linguistics literature with a variety of names and emphases. It is also known as the *animacy*, *egocentricity*, *humanness*, *nominal*, *indexability*, or *empathy hierarchy* (Zuniga 21). Lockwood and Macauley define prominence hierarchy as a term used to mean a "ranking of person and other categories of reference for a variety of grammatical purposes" (1). The basic ranking of categories in prominence hierarchies are SAP (speech act participants)> 3rd person pronoun > [human>animate>inanimate] (Zuniga 21). Different authors have named and broken down these ranked categories in the hierarchies in different ways (Lockwood and Macauley 1).

How the grammar of any one language reacts to this or what features are relevant to the hierarchy very and are not necessarily universal within even one

….continued on page 4

THE FIFTH PRAIRIES WORKSHOP ON LANGUAGE AND LINGUISTICS

The Interdisciplinary Linguistic Program is hosting the Fifth Annual Prairie Workshop on Languages and Linguistics (PWoLL V). We are happy to announce that – after one-year break – this event is back on track. PWoLL is an annual linguistic conference that brings together linguists at all levels from the prairies and beyond who conduct research on all facets of language. The Workshop will be held on Saturday, March 16 2019, in Lockhart Hall (1L11; 1L12; and 1L13). You can check our website for further information:
https://www.uwinnipeg.ca/pwoll2019/index.html

Interdisciplinary Linguistic Program Faculty:

The ILP is anchored at the Department of Anthropology; the core of the Linguistic Faculty resides at that Department, as well as in English, Modern Languages and Classics:

ILP Faculty:

Ivan Roksandic (Anthropology) teaches *Languages of the World*, *Morphology* and *Indo-European Linguistics*. His main research interests are language typology and indigenous languages of South America. His current project focuses on the indigenous toponymy in the Caribbean.
Jane Cahill resides in the department of Classics. She teaches courses in Latin and Greek, as well as *Greek and Latin in Today's English* and *The Classical Roots of Medical Terminology*.
Amy Desroches (Psychology) uses cognitive and brain imagining methods to examine reading and language development. In particular, her work focuses on the role of phonology in learning to read, and the impact that reading development has on spoken language processing.
George Fulford is an Anthropological linguist, specializing in Cree and Algonquian languages. He is especially interested in problems related to grammaticalization, language origins, and semiotics and structuralism.
Zbigniew Izydorczyk teaches at the Department of English. His areas of special interest include Old and Middle English, history of English, history of Latin, and palaeography.
Andrew McGillivray (Rhetoric) teaches *Transnational and Intercultural Language and Communication*. His research interests include Icelandic studies, mythology, and medieval rhetoric. He is currently developing a project about cultural memory and the representation of heritage in Manitoba's Interlake region.
Kristin Lovrien-Meuwese (Modern Languages) is interested in language learning in general and second language acquisition in particular, but has most recently worked on a sociolinguistic study of German in Manitoba.
Jorge Machín-Lucas (Modern Languages) is a specialist in XXth and XXIst Century Spanish Literature, and teaches courses in Spanish Normative Grammar and History of the Spanish Language.
Sky Onosson (Anthropology) a sociophonetician and phonologist who has worked on languages including North American English, Japanese and Brazilian Portuguese. Much of his research involves empirical, computational and theoretical approaches to understanding the dynamic properties of vowels.
Liliane Rodriguez (Modern Languages) teaches Linguistics, Comparative Stylistics and Translation. Her main research is in Lexicometry, Geolinguistics and Bilingualism. She is the author of several books and of many articles in Linguistics and Translation Studies.
Shelley Tulloch (Anthropology) teaches *Sociolinguistics*. Her research interests include bilingualism, identity, and language revitalization. Her current research focuses on intercultural Inuit education.

In addition, several courses inluded in the ILP curriculum are taught at other Departments; UW faculty members from those Departments associated with the ILP include **Jeffrey Newmark** (Religion and Culture), **Tracy Whalen** (Rhetoric), **Bea Castaneda (**Developmental Studies), and **Glenn Moulaison**, the Dean of Arts, who teaches *History of the French Language*.

Students

Admissions: Students interested in majoring in Linguistics should contact the Coordinator of the ILP.

Award: The Angela Mattiaci Memorial Scholarship in Interdisciplinary Linguistics is awarded every October to a student majoring in linguistics with a distinguished performance in ILP courses. For more information visit our website at: http://www.uwinnipeg.ca/index/interdisciplinary-linguistics

Colloquium: Every year in April, after the exam period, the Annual Student Colloquium is held, offering to students an opportunity to present the results of their research to the audience of their colleagues.

The XX Annual Student Colloquium in Linguistics for 2018/19 will take place on Wednesday, April 24th, from 10:00 AM - 3:00 PM, in room 3D04, on main campus.

Fall/Winter 2019/20		
LING-1001-001 Introduction to Linguistics	10:00 – 11:15 Tu/Th	I. Roksandic
LING-3311-001/FREN-3111-001 Comparative Stylistics and Translation	4:00 – 5:15 M/W	L. Rodriguez
Fall 2019		
LING-2002/ANTH-2402/ENGL-2805 Morphology	4:00 – 5:15 Tu/Th	TBA
LING-2103-001/ANTH-2404-001 Languages of the World	2:30 – 3:45 Tu/Th	I. Roksandic
LING-2301-001/FREN-2202-001 Phonetics (lab required)	2:30 – 3:45 M/W	L. Rodriguez
CLAS-2850-001 The Classical Roots of Medical Terminology	8:30 – 9:20 M/W/F	TBA
CRS-2252-050 Conflict and Communication	6:00 – 9:00 W	J. Hyde
PSYC-2620-001 Psycholinguistics	11:30 – 12:45 Tu/Th	A. Desroches
LING-3102/4102/ANTH-3406/4406 Indo-European Language and Myth	11:30 – 12:45	Tu/Th I. Roksandic
LING-3105-050/DEV-3300-050 Speech and Language Disorders	5:30 – 8:30 Th	B. Castaneda
SOC-3214-001 Mass Communication and Media	1:30-2:20 M/W/F	TBA
Winter 2020		
LING-2001-001/ANTH-2401-001/ENGL-2803/001 Phonetics and Phonology	4:00 – 5:15 Tu/Th	TBA
LING-2104/ANTH-2405/ENGL-2806 Semantics	2:30 – 3:45 Tu/Th	TBA
LING-2102/ANTH-2400 Method and Theory in Linguistic Anthropology	11:30 – 12:45 T/Th	I. Roksandic
LING-2401-001 German Phonetics	2:30-3:45 Tu/Th	K. Lovrien-Meuwese
CLAS-2850-002 The Classical Roots of Medical Terminology	8:30 – 9:45 Tu/Th	TBA
CRS-2252-001 Conflict and Communication	10:30-11:20 M/W/F	J. Hyde
LING-3103-001 Sociolinguistics	1:30-2:20 M/W/F	S.Tulloch
ENGL-3812-001 History of the English Language	9:30-10:20 M/W/F	Z. Izydorczyk
FREN-3301-001 History of the French Language	1:30-2:20 M/W/F	G. Moulaison
PSYC-3480-050 Interpersonal Communications	1:00 – 2:15 Tu/Th	TBA
RHET-3139-001 Rhetorics of Visual Representation	11:30 – 12:45 Tu/Th	TBA
LING-4003 Topics in Linguistics	1:00-2:15 Tu/Th	TBA

*Courses Subject to Change

language (Macauley 306). In some cases, in the literature relating to prominence hierarchies, it is stated that 1st person outranks 2nd universally. Evidence from Algonquian languages have been used to overturn this assumption, holding instead that 2nd outranks 1st in Algonquian languages (Mithun 224). Some languages do rank 1st person before 2nd in some realms while in other realms vice versa, but no universal statement seems able to be made (Macauley 386).

The direct inverse alignment pattern is also best explained by the prominence hierarchy. Core arguments in Ojibwe are expressed by pronominal prefixes and suffixes on verbs, while nouns are not inflected for case (Mithun 222). Ojibwe distinguishes 4 persons, 1, 2, 3, and 3' (obviative). 1pl is further distinguished by inclusive and exclusive. 3 is also divided into animate and inanimate gender, with affixes and rules relating to each differing widely. The division of inanimate/animate follows along the prominence hierarchy in that at a certain point along the hierarchy, all nominals that are to the left are assigned to the animate class and those to the right are inanimate. "People, animals, trees and most other things that are inherently alive" (Sullivan 332), while inanimate includes things like many plants, non-living things, and abstract nouns.

Ojibwe has four major classes of verb types aligning with the animate/inanimate distinction and transitive/intransitive. IAs are intransitive and always have an animate subject. IIs are also intransitive and have inanimate subjects. TAs are transitive and have animate subjects (also a marked form for inanimate subject) and *must* take an animate object (Valentine 132). TI are also transitive take animate subjects and must take an inanimate object.

(1)
IA *biinizi* s/he (something animate) is clean
II *biinan* it is clean
TA *ni-biini'-aa* I am cleaning him/her (something animate)
1sg-clean-DIR(3sg.obj)
TI *ni-biinitoon* I am cleaning it
1sg-clean.it

It is easy in Ojibwe to have inanimates as objects but more difficult grammatically to have them as subjects. In fact, it is impossible to have inanimates as subjects acting on other inanimates due to the rigid nature of inflection for referents. If an inanimate is a subject of a clause, it uses the TA or TI verb form. It is very rare in

Ojibwe snowshows dance by George Catlin (left) and Distribution of Ojibwe-speaking people (right) (Wikimedia Commons)

spoken language and so is very marked when an inanimate acts on an animate referent (the most common I hear are 'it angers me off', or 'it's healthy for you'). More common is in legends where things can take on a life of its own. I examined a text and it most often occurred when something inanimate like a skull magically came alive (Ningewance). Rather than having an inverse form for TIs, the TA root is used.

Direct/inverse refers to suffixes that indicate the grammatical relations between core arguments, not by marking subject or object, but by two affixes. The direct suffix indicates that the O is lower on the prominence hierarchy than the A, while the inverse suffix indicates the opposite, the O is higher than the A.

(2)

TI

Direct SAP+animates > inanimate
(no inverse form, see TA if an inanimate acts on an animate)

TA

Direct **–aa-** SAP>animates or proximate>obviative
Inverse **–igw-** SAP<animates or proximate<obviative (or SAP+animates<inanimate)

With TAs, or transitive animate verbs, in independent paradigm grammatical relations are encoded by affixes on either side of the root. –aa marks the direct form and –igw realized as –ig, -igo- or –igoo-, marks inverse.

Direct paradigm	Inverse Independent
(5)	
1-3 **ni-wiijiiw-aa** I go with h/h 1-go.with-DIR.	**ni-wiijiiw-ig** S/he goes with me 1-go.with-INV
1-3p **ni-wiijiiw-aa-g** I go with them 1-go.with-DIR-3pl.	**ni-wiijiiw-igoo-g** They go with me 1-go.with-INV-3pl.
1p-3 **ni-wiijiiw-aa-naan** We go with h/h 1-go.with-DIR-1p	**ni-wiijiiw-igo-naan** S/he goes with us 1-go.with-INV-1p
1p-3p **ni-wiijiiw-aa-naan-ig** We go with them 1-go.with-DIR-1p-3p	**ni-wiijiiw-igo-naan-ig** They go with us 1-go.with-INV-1p-3p
21-3 **gi-wiijiiw-aa-naan** We go with h/h 2-go.with-DIR-21	**gi-wiijiiw-igo-naan** S/he goes with us 2-go.with-INV-21
21-3p **gi-wiijiiw-aa-naan-ig** We go with them 2-go.with-DIR-21-3p	**gi-wiijiiw-igo-naan-ig** They go with us 2-go.with-INV-21-3p
2-3 **gi-wiijiiw-aa** You go with h/h 2-go.with-DIR.	**gi-wiijiiw-ig** S/he goes with you 2-go.with-INV.
2-3p **gi-wiijiiw-aa-g** You go with them 2-go.with-DIR-3p	**gi-wiijiiw-igoo-g** They go with you 2-go.with-INV-3p
2p-3 **gi-wiijiiw-aa-waa** You people go with h/h 2-go.with-DIR-2p	**gi-wiijiiw-igo-waa** S/he goes with you people 2-go.with-INV-2p
2p-3p **gi-wiijiiw-aa-waa-g** You people go 2-go.with-DIR-2p-3p	**gi-wiijiiw-igo-waa-g** They go with you people 2-go.with-INV-2p-3p
3-3' **o-wiijiiw-aa-n** S/he(3) goes with h/h (3') 3-go.with-DIR-3'	**o-wiijiiw-igoo-n** S/he(3') goes with h/h(3) 3-go.with-INV-3'
3-3'p **o-wiijiiw-aa-'** S/he(3) goes with them (3'p) 3-go.with-DIR-3'pl	**o-wiijiiw-igoo-'** They(3'p) go with h/h(3) 3-go.with-INV-3'pl

3p-3' **o-wiijiiw-aa-waa-n** They go with h/h (3') **o-wiijiiw-igo-waa-n** S/he(3') goes with them(3p)
3-go.with-DIR-3p-3' 3-go.with-INV-3p-3'
3p-3'p **o-wiijiiw-aa-waa-'** They(3p) go with them (3'p) **o-wiijiiw-igo-waa-'** They(3'p) go with them(3p)
3-go.with-DIR-3p-3'p 3-go.with-INV-3p-3'p

It should be noted that Ojibwe has two main patterns of inflection. The one above is called the independent. The other is the subjunctive which relies exclusively on suffixation. Its forms do not really follow along the direct/inverse pattern.

Clearly from the above examples, SAPs are higher than 3, since the third person prefix '*o-'* only shows up in the absence of SAPs and because of the direct inverse suffixes. Paradigms involving only 1st and 2nd person cannot really be analyzed as following the direct inverse pattern. One could analyze the 1st person object forms –i- as being object and –in- as the object marker for 2nd person. The forms for 1p>2sg and 1p>2pl are identical to the forms for X>2sg and X>2pl *(X=indefinite actor, essentially passive)
1-2 independent **gi-wiijiiw-in** I go with you **gi-wiijiiw(ish)** you go with me
1-2 subjunctive **wiijiiw-inaan** when/if I go with you **wiijiiw-iyan** when/if you go with me

1-2p **gi-wiijiiw-ininim** I go with you people **gi-wiijiiw-im** You people go with me
1-2p subjunctive **wiijiiw-inagog** when/if I go with you people **wiijiiw-iyeg** when/if you people go with me

1p-2 **gi-wiijiiw-igoo** we go with you **gi-wiijiiw-imin** you go with us
1p-2 subjunctive **wiijiiw-igooyan** when/if we go with you **wiijiiw-iyaang** when/if you go with us

1p-2p **gi-wiijiiw-igoom** we go with you people. (1p<2p identical to 1p<2sg)
1p-2p subjunctive **wiijiiw-igooyeg** when/if we go with you people (1p<2p identical to 1p<2sg)

As seen here there is no affix that indicates a direct inverse relationship for 1 and 2. They each have their own idiosyncratic forms. From the above examples you can see that the 2 person marker *gi-* (can signal 2, 2p, 21) is preferred over the 1 person theme marker *ni-*. This pattern is also seen in the TI and IA independent verbal inflection patterns as well as the possessive suffixes on nouns, all of which use similar affixes to those found on TAs. This is the basis of the claim that 2nd person outranks 1st (2 > 1 > Proximate > Obviative) in Ojibwe and other Algonquian languages.

Macauley addresses this claim offering a more nuanced stance. Studying multiple paradigms across a number of Algonquian languages, she found that it is not as cut and dry as that and that languages show differences. No Algonquian language can be said to rank 2 over 1 in all realms, but some do preference 2 over 1 in more realms than others. She studied possessive suffixes, verbal prefixes, theme signs (direct inverse) and plural suffixes on TAs.

For Ojibwe, 2 ranks over 1 for verbal inflection and possessives but when it comes to plural suffixes preference is given to 1. When 1p acts or is acted on by 2 and 2p, 2 and 2p are not distinguished. As such it is ambiguous whether it is singular or plural.

TA imperative mood "tell"	2 you SUBJ	2p you people SUBJ
1 OBJ	wiindamaw-ishin	wiindamaw-ishig
1p OBJ	wiindamaw-ishinaam	wiindamaw-ishinaam

TA subjunctive "tell"	2 you SUBJ	2p you people SUBJ
1 OBJ	wiindamaw-iyan	wiindamaw-iyeg
1p OBJ	wiindamaw-iyaang	wiindamaw-iyaang

TA independent "tell"	2 you SUBJ	2p you people SUBJ
1 OBJ	gi-wiindamaw-ish	gi-wiindamaw-im
1p OBJ	gi-wiindamaw-imin	gi-wiindamaw-imin

Prominence hierarchies offer insight to issues of alignment certain patterns across languages, especially exemplified by Ojibwe direct inverse verbal pattern. Claims that Ojibwe ranks 2>1, however, are taken too far. Evidence shows that in some cases it is, but not universally. As it relates to direct inverse, no ranking can be made out. Considering the claim that prominence hierarchies have their basis in deeper structures of thought, more in depth work could be done on that aspect. Lockwood and Macauley (440) note that authors have came at the topic of prominence hierarchies with different goals and assumptions. Some are more interested in a descriptive model while others in a comparative model. To me, the model seems most useful in its descriptive aspect. If patterns best described by the prominence hierarchy are the result of common thought patterns, (action originating from more animate referents and preceding to less animate ones), then it would be helpful to consider and review larger texts and spoken language to ascertain if it is in fact the case.

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[1] Also know as Anishinaabemowin, or in English also as Ojibwe, Chippewa, Saulteaux.

[2] The endings of IA, II, and TI cannot really be analyzed separately from the root -biin- as they are not consistent with other verbs of the same type.)

The Importance of the Animacy Hierarchy in Swahili Agreement Structures

Jessica McInnes, Major in Linguistics

In Swahili they have a saying "*mtu ni watu"* which, directly translated is "a person is people". The deeper meaning is that every person is connected to other people and what affects one person will affect many others. In the cultures that speak Swahili, people and community are foremost.

The high value given to people shows up in the Swahili language as well. This phenomenon is wide spread across many languages (Ji & Liang 71) and linguistically evaluated through the animacy hierarchy. In some languages the hierarchy simply influences grammar without causing any fixed rules. In Swahili though, it is such a foundational concept that Swahili is an animacy-based language. This means that animacy functions as a grammatical constraint, causing the creation of grammatical rules (Ji & Liang 73). The effects of the animacy hierarchy are widespread in Swahili but they are an essential part of the agreement structures.

Swahili belongs to the Bantu language family of East Africa and in 2006 was spoken by over 50 million people (Marten 304).

The Animacy Hierarchy is a spectrum that sorts nouns based upon "the speaker's identification or empathy" (Ji & Liang 73). The hierarchy has three broad categories: human, non-human animate, and inanimate; beyond these broad categories each language and culture breaks it down differently. The generally accepted hierarchy, as recorded by Ji & Liang, can be found below (72):

first & second person pronouns	>	third person pronouns	>	proper names & kin names	>	other human	>	animal	>	inanimate

In Swahili the effect of the animacy hierarchy is especially prominent in the agreement structures. Linguistic Agreement is defined as a syntactic relationship between words and phrases which are compatible because of inflections on at least one of the constituents (Matthews). Because Swahili is a split marked language, its agreement structures and the affect of the animacy hierarchy looks different at the phrasal and clausal levels.

At the phrasal level, Swahili marks dependants. Structurally, it uses a noun class system with 16 classes. Adjectives, demonstratives, numerals, possessive pronouns and some adpositions all must agree with the class of the noun they refer to (Marten 306-307).

Noun classes 1 - 11 are the largest classes and contain almost all Swahili nouns. These classes come in pairs (except for class eleven) with the odd class containing singular forms and the following even class containing the plural forms of the same nouns.

Classes 1/2 contain only animate nouns and mostly human nouns with a few exceptions such as the word meaning "animal." The agreement marking for an animate noun in classes 1/2 is shown in 1a. The demonstrative, possessive pronoun, numeral, adjective and adposition are all marked to show that they are referring to a class 2 animate noun.

Classes 3-11 contain all the inanimate nouns as well as those animate nouns that are not in classes 1/2. Example 1b shows what happens when an animate noun belongs to one of the 'inanimate' classes. The agreement markings do not agree with the class of the noun. They are taken from animate classes 1/2 because the animacy of the noun trumps its class placement. Example 1c shows the markings for an inanimate noun that belongs to the same class as the noun in example 1b. The very system in Swahili is set up to highlight which nouns are animate regardless of whether they actually belong to the animate 1/2 classes or not.

Basic agreement:

Hawa ni wa-limu wangu wa-tatu wa-refu wa Tanzania
DEM.CL2 be.PRES CL2-teacher my.CL2 CL2-three CL2-tall PPOS.CL2 CL11.tanzania
"These are my three tall Tanzanian teachers"

Hawa ni twiga wangu wa-tatu wa-refu wa Tanzania
DEM.CL2 be.PRES CL10.giraffe my.CL2 CL2-three CL2-tall PPOS.CL2 CL11.tanzania
"These are my three tall Tanzanian giraffes"

Hizi ni nyumba zangu Ø-tatu nd-efu za Tanzania
DEM.CL10 be.PRES CL10.house my.CL10 CL10-three CL10-tall PPOS.CL10 CL11.tanzania
"These are my three tall Tanzanian houses"

All animate nouns in classes 3-11 take the animate markings of classes 1/2 with singular nouns taking the marking from class 1 and plural from class 2. The only exception to this rule is the kinship terms occurring in classes 9/10 which take all of the animate markings as usual, except possessive pronouns which are taken from their own class as example 2a shows.

Kinship Terms:

Hawa ni Ø-rafiki zangu wa-tatu wa-refu wa Tanzania
DEM.CL2 be.PRES CL10.friend my.CL10 CL2-three CL2-tall PPOS.CL2 CL11.tanzania
"They are my three tall Tanzanian friends"

A few words that occur in classes 3-11 determine their meaning by whether their agreements are animate or inanimate. This is shown by examples 3a and 3b. Similarly, if an animal is marked as animate they are alive but if their agreements are inanimate they are dead – or meat. This is shown by examples 3c and 3d.

Grammatical rules generated by the animacy hierarchy can divide it at any point. In Swahili the rules consistently divide the hierarchy between animate and inanimate. There are no rules that differentiate animals and humans or between first, second or third person.

Differentiation:

Ø-ndege mw-eupe
CL9-bird CL1-white
"White bird"

Ø-ndege ny-eupe
CL9-airplane CL9-white
"White airplane"

Ø-kuku mw-eupe
CL9-chicken CL1-white
"A white chicken"

Ny-ama ya Ø-kuku ny-eupe
CL9-meat PPOS.9 CL9-chicken CL9-white
"Meat of a white chicken"

Possessive pronouns are plentiful on the animate side of the divide, but are almost non-existent on the inanimate side. When an animate noun owns something, it uses a pronoun that agrees with the person and plurality of the owner and with the class of the thing owned as 4a shows. All possible inflections are present, creating a total of 90 possible forms. On the other hand, there is no unique pronoun to use when an inanimate noun 'owns' something. The singular third person pronoun is borrowed and inflected to agree with the class of the thing owned. The singular is used whether the owner is singular or plural. 4b +c are examples of an animate owner where the pronoun changes with the plurality of the owner. Examples 4d +e show that when the owner is inanimate, the pronoun remains in singular no matter the plurality of the owner (Lyatuu 187). It is a widely attested principle that there is greater variety and more options at the top of the spectrum closer to the speaker.

Possessive:

Ki-tabu ch-angu
CL7-book CL7-POSS.1SG
"My book"

M-vulana na mi-guu y-ake
CL1-boy have.PRES CL4-leg CL4-POSS.3SG
"The boy and his legs"

Wa-vulana na mi-guu y-ao
CL2-boy have.PRES CL4-leg CL4-POSS.3PL
"The boys and their legs"

Ki-ti na mi-guu y-ake
CL7-chair have.PRES CL4-leg CL4-POSS.3SG
"The chair and its legs"

Vi-ti na mi-guu y-ake
CL8-chair have.PRES CL4-leg CL4-POSS.3SG
"The chairs and its (sic!) legs"

All adjectives in Swahili have one inflected form per class as shown by example 5a. The root of the adjective takes the class agreement prefix. The adjective *–ote,* which means 'whole' in singular and 'all' in plural, is the one exception to this rule. It takes a modified class subject prefix and has three different forms for class 2: first person plural, second person plural and third person plural. This is shown in examples 5b-d. Example

5e shows the same sentence with an inanimate object. This is another example of the animate side of the hierarchy having more variety than the inanimate side. In this case it allows the speaker to use a greater degree of specificity when talking about groups of animate beings.

Adjectives:

M-zuri, wa-zuri, m-zuri, mi-zuri, Ø-zuri, ma-zuri, ki-zuri, vi-zuri, n-zuri, n-zuri, m-zuri

CL1-good, CL2-good, CL3-good, CL4-good, CL5-good, CL6-good, CL7-good, CL8-good, CL9-good, CL10-good, CL11-good

Tu-li-ji-pik-ia sote

SBJ.1SG-PST-REFL-cook-BEN all.1PL

"I cooked for us all"

Ni-li-m-pik-i-eni nyote

SBJ.1SG-PST-OBJ.2PL-cook-BEN-OBJ.2PL all.2PL

"I cooked for all of you guys"

Ni-li-wa-pik-ia wa-nyama wote

SBJ.1SG-PST-OBJ.3PL-cook-BEN CL2.animal all.3PL

"I cooked for all the animals"

Ni-li-zi-pik-ia shule zote

SBJ.1SG-PST-OBJ.CL10-cook-BEN school all.CL10

"I cooked for all the schools"

At the clausal level in Swahili, all the marking happens on the verb. Both subject and object are marked. When the direct object (DO) is inanimate, a marker is not mandatory, as shown in example 6a. This contrasts with 6b, where the DO is animate, making the verb marker mandatory (Morimoto 296). It is well known that the objects that are high on the animacy hierarchy are "more likely to trigger agreement" (Woolford 203).

Object marking for animates:

U-li-(u)-piga m-keka

SBJ.2SG-PST-(OBJ.CL3)-hit CL3-mat

"You hit the mat"

U-li-m-piga m-toto

SBJ.2SG-PST-OBJ.3SG-hit CL1-child

"You hit the child"

A verb can only have one object marker which leads to four basic situations. Clauses with only a DO which is either animate or inanimate, as addressed above, or clauses with a DO (animate or inanimate) and an indirect object (IO). This progression is shown below in examples 7a-d. In Swahili, animate is always marked on a verb and the IO takes precedence over the DO. This means if an IO is present it is always marked even if the DO is also animate. In clausal marking, as in phrasal, grammatical rules are based on animacy and differentiate only between animate and inanimate.

Indirect object marking:

Ni-ta-(ki)-chukua ki-kapu

SBJ.1SG-FUT-(OBJ.CL7)-carry CL7-basket

"I will carry the basket"

Ni-ta-ku-chuku-lia ki-kapu

SBJ.1SG-FUT-OBJ.2SG-carry-BEN CL7-basket

"I will carry the basket for you"

Ni-ta-m-chukua m-toto

SBJ.1SG-FUT-OBJ.3SG-carry CL1-baby

"I will carry the baby"

Ni-ta-ku-chuku-lia m-toto

SBJ.1SG-FUT-OBJ.2SG-carry-BEN CL1-baby

"I will carry the baby for you"

In guise of conclusion, we can reitarate the statement that animacy is at the root of the grammatical structure

of Swahili language. It dictates many of the grammatical rules, especially in the agreement structures, creating a dichotomy between animate and inanimate, and allowing more usage options for animates. In learning Swahili, the importance of animacy is one of the first and most important concepts that is taught. This is because animacy is not just an abstract grammatical concept in East Africa. People and the way they are valued are foundational principals woven in to the fabric of their culture.

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KUWA MTULIVU NA UJIFUNZE SWAHILI

Diversity and the snowball effect in cognate-oriented bilingual studies

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This paper is a brief literature review aimed at identifying significant issues within the field of bilingual research, constrained to experimental studies with a specific focus on the role of cognates. When conceiving of this study, I initially sought to answer the question: How do these kinds of experimental studies inform our theoretical conception of the bilingual lexicon? This question is pertinent beyond the domain of bilingual studies; general models of the lexicon should be able to address lexical representations of both bilingual and multilingual speakers, or they fail as complete models of language. Furthermore, network associations between cognates, however conceived for bilinguals, may be reasonably assumed to have heightened complexity compared to monolinguals.

This presumed complexity provides a multiplicity of avenues for testing various aspects of a given model or theory. Experimental methodology is of critical concern here, as it is the tool by which to explore these avenues. Accordingly, the following question must be asked: How successful are the choices made in experimental design within cognate-oriented research on the bilingual lexicon? To answer this question, 22 published articles (see References) discussing cognate-oriented bilingual studies were selected for review.

Within the 22 articles surveyed there are a wide number of experimental approaches in the investigation of cognate effects. Despite a diversity of ten different task types being involved, two overwhelmingly predominate: lexical decision (N=7), and picture naming (N=6). Three other experimental tasks—language decision, word naming, and word recognition—were used more than once (in two studies each), while five remaining task types are represented by only a single study each.

Lexical decision tasks are the most frequently used type of task among the investigated studies. De Groot & Nas (1991)

utilized a lexical decision task in conjunction with masked priming and concluded that both cognates and noncognates showed evidence for separate, but connected representations in bilinguals. Lexical decision tasks have been used frequently in the following decades, typically to address similar theoretical questions about the (non-)distinctiveness of L1 and L2 representations in the lexicon.

The high frequency of use of this particular task raises two important questions. First, what are the limitations of this task? While these studies have produced solid findings, we must also consider that a given task can only reveal certain aspects of linguistic competence. For example, lexical decision results are typically measured by reaction time (RT). Based on RT, findings in these studies have identified a number of important factors in lexical access, including: the role of orthography as a cue (Gollan et al., 1997), neighbourhood effects (Van Heuven et al., 1998) and sentential context (Van Asche et al., 2013). Over-reliance on a single procedure may potentially lead researchers to focus heavily on certain aspects of language such as these, while simultaneously overlooking others which are less accessible under this approach.

Secondly, the preponderance of studies involving lexical decision tasks itself prompts the question, What has led to its status as a "go-to" procedure? It is always possible for there to be a bias towards tasks which are well-studied and understood, are easy to perform, and that produce results which are easily compared to previous research. As a given type of experiment becomes widely-used, a snowball effect may occur, where further experimentation in the same vein becomes simply easier to carry out in many respects, from the design stage to publication. In this way, and as pointed out above, aspects of language which fall outside of the purview of the particular task might remain understudied.

The second most widely-used task in this research field, rivalling lexical decision in frequency of use, is picture naming. Six of the studies examined involved this task. The trend of usage here is more recent, predominantly occurring in the 21st century. Studies utilizing picture naming have produced distinctive results. Costa et al. (2000) observed that language dominance was a significant factor in whether or not cognate facilitation effects were observed (facilitation was present but highly diminished in the dominant language). Picture naming also presents some opportunities for diverse observational methods. For example, De Bleser et al. (2003) conducted a PET study while their subjects named the pictured stimuli internally, i.e. in silence. Studies involving picture naming tasks have furthermore reached distinctive theoretical conclusions. De Blesser et al. (2003) argue for non-distinct representations between the two languages, while Cai et al. (2011) argue that lemma representations of cognates are distinctly represented.

These findings speak to the concerns discussed in the previous section, as they indicate how increased methodological diversity can produce diverse results. However, given the high frequency of usage of picture naming tasks among the selected studies, the same concerns raised during the discussion of lexical decision apply here as well. Picture naming is just one of many possible tasks that might be involved in a study, and potentially as limited in scope as any other task. There will be issues for which it is well-suited, and areas for which it is simply inapplicable. The two highly frequent tasks of lexical decision and picture naming together drive the focus of cognate-based research, at least within the studies surveyed here. As tasks in and of themselves, they are perfectly valid and produce informative results. It is in their preponderance of use that concern should arise, which may be addressed by increased representation of other types of experimental tasks.

The fact that the bulk of experimental research in the studies selected for this review is comprised of just two types of experiments might justifiably be seen as unwarranted over-reliance on a limited toolbox of experimental tasks, while admitting the potential for this to lead to over-representation of task-dependent effects in the literature. This situation, however, frankly pales in comparison to the lack of diversity of languages involved in this survey, and for which there is much less justification to be offered. The preponderance of English (N=19) as a language of experimentation is both unsurprising and concerning. English and Dutch (N=10), the second-most frequent language of study, are involved variously or together in two-thirds of the studies investigated. Both languages are, of course, closely related, West Germanic languages, and have many typological similarities besides. The next two most common languages, Spanish (N=5) and French (N=3) are another pair of closely related (Western Romance) languages. Furthermore, these four languages, comprising nearly two-thirds of all studies involved in this review, are of course Western European, Indo-European (IE) languages with a number of typological similarities between them. The number of non-IE languages involved is strikingly small at just five, and each of these involved in only a single study apiece: Cantonese, Hebrew, Japanese, Korean, and Mandarin. Even within this group set there is a noticeable lack of diversity: Cantonese and Mandarin are related Chinese languages with a number of typological similarities; Japanese and Korean, while not widely believed to be genetically related, have been argued to be so by some scholars largely on the basis of many shared typological traits. Only the Semitic language Hebrew truly stands apart from the others.

The lack of genetic and typological diversity of experimental language, and especially the dominance of two closely related and similar languages, is at least as troubling as the lack of diversity of experimental tasks noted earlier. Findings within the small set of non-IE-exclusive studies are highly suggestive. In the only study surveyed to compare two non-IE languages, Cai et al. (2011) found evidence for distinctive lemma representations between cognates in bilingual speakers of Cantonese and Mandarin. Another interesting set of findings among this group includes evidence both for (Gollan et al., 1997) and against (Hoshino & Kroll, 2008; Moon & Jiang, 2011) different-script effects on lexical access. Clearly, more work needs to be done to address the lack of linguistic diversity in cognate-oriented research.

Although this literature review is quite limited in both scope and depth, I hope that it has managed to identify some particular areas of concern. The basic problem is quite simply stated: over-reliance on both commonly used experimental tasks and commonly spoken languages is a rampant feature of this particular areas of research. The purpose of this survey and its conclusion is not to single bilingual cognate-focused research, as these prob-

lems are by no means exclusive to this field.

It is certainly no surprise to see English dominate all other languages represented in the surveyed studies. The overwhelming preponderance of work done on English in many domains of linguistic research is obvious to anyone interested in seeing it, and just as obviously problematic; researchers must seriously consider that a single language (or two, or four) is not likely to reveal every facet of human linguistic capacity, or at least not reveal some facets as easily as others. Given that much linguistic research takes place in urban centres where multitudes of languages are spoken, and that linguistic researchers themselves constitute diverse speech communities, the solution to this issue seems fairly simple: researchers need to make greater linguistic diversity a primary focus of the design process.

The lack of diversity in experimental methodology is equally easy to address. A wide range of experimental tasks exist and have produced intriguing results worth expanding upon. Results which speak to diverse areas of linguistic competence provide direct feedback to our theoretical conceptions. Part of the methodology of experimental design should seek to address the issue of diversity head-on at an early stage in the design process and ensure that any given study is contributing to expanding our knowledge by investigating new and under-studied areas of research. To restate my research question from the Introduction: How successful are the choices made in experimental design within cognate-oriented research on the bilingual lexicon? I believe that they are largely successful in spite of these shortcomings, but that a focused effort on addressing these issues of lack of diversity can do nothing but increase the quality of work produced in this, or indeed any area of research.

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The Aspect System of Mandarin

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Tense and Aspect systems are important factors in all languages of the world. Some languages may not contain both tense and aspect in their verbal system, such as Mandarin. This paper will explore how Mandarin solely relies on the aspect markers to indicate different temporal perspectives of an expression, as well as the problems researchers have with defining the perfective aspect marker *le.*

The Aspect System of Mandarin

Similarly to other isolating languages, there is no inflectional morphology in Mandarin to express the notions of tense, number, gender, person and mood. Therefore, aspect markers are used, considered to be a "special grammaticalised category in Mandarin" (Wolfgang, Ping, & Henriette, 2000, p. 723). There are four main aspect markers: *le, guo, zhe* and *zai*; the first three aspect markers: *le, guo* and *zhe*

follow the verb, while the last aspect marker, *zai* precedes the verb. In addition, linguists have agreed that *zhe* and *zai* characterize imperfective, progressive and durative aspects, while *le* and *guo* express perfective aspect.

The Perfective Aspect Marker

According to traditional analysis, the particle *le* is considered a perfective marker that presents "a situation in its entirely, as an event bounded at the beginning and end" (Wolfgang, Ping, & Henriette, 2000, p. 724). In some occasions, *le* is often categorized as a completion marker. Moreover, the researchers state that "the meaning of completion [comes] from the meaning of the verb with which *le* occurs." (Wolfgang, Ping, & Henriette, 2000, p. 724). For instance, when the verb is in a situation with a temporal boundary, the particle *le* demonstrates that the situation has ended naturally and that the situation is completed. However, when the verb is in a situation with no termporal boundary, *le* indicates a terminated situation instead of a completion of a situation. To create a better understanding of the two situations, an example is provided by (Wolfgang, Ping, & Henriette, 2000, p. 724):

1. When a verb encodes a situation with a temporal boundary:

Qi-chi Zhuang-dao –le fangzi
car hit-break -LE house
The car knocked down the house

2. When a verb encodes a situation without a temporal boundary:

Xiao yazi you-le yong
ducking swim-LE stroke
the duckling swam

In the first example, the sentence encodes a telic to express that the event has been completed. Therefore, the perfective particle *le* expresses that the end result has been achieved. In the second example we present an atelic activity verb that does not have a natural endpoint, thus the particle *le* indicates that the event had happened and finished at some indefinite point in time.

On the other hand, the perfective particle, *guo* is characterized as the experiential marker, which indicates that an "event has been experienced at some indefinite time " (Wolfgang, Ping, & Henriette, 2000, p. 725), usually in the past. The effect of the event made by *guo* is no longer there, at the time of the utterance. Furthermore, some authors have argued that since *guo* is associated with the past, it can sometimes be characterized as having a tense function, but it does not by itself indicate the past. Despite the similarities between the two perfective particles, *guo* and *le*, the semantics of *guo* extends an event that could have occurred before, which means the experiencer has attempted performing or has previously experienced the event. The examples shown below demonstrate the difference between the two particles *le* and *guo* (Huang Meei-jin & Davis, 1989, p. 150):

1. Wo chi le yu-chi
I eat LE fish-fin
I ate the shark's fin
2. Wo chi guo yu-chi
I eat GUO fish-fin
I once ate the shark's fin

The first sentence shows how the experiencer occurs in a context that indicates eating shark's fin is normally present; it demonstrates that the speaker has completed the meal and he/she has eaten the shark's fin. In the second example, the experiencer states that they do not normally eat shark's fin, but they have once tried it. Lastly, the two perfective markers also differ in definiteness: *le* indicates boundedness and marks a specific definite event, and *guo* marks an event that has taken place at sometime in the past. Authors have stated that *le* marks a specific event time, that takes place before and closely to the its sentence reference time, whereas *guo* is "providing an existential quantification over times which, are earlier than the *guo* sentence's reference time" (Wolfgang, Ping, & Henriette, 2000, p. 726).

The Imperfective Aspect Markers

The imperfective particle, *zai* was once considered a verb, then an adposition, and now an imperfective aspect marker. The adposition *zai* occurred before or after the verb, but as an aspect marker it always occurs before the verb. *Zai* is a progressive marker because it indicates an event or action that is in progress. In contrast to *zhe,* it is known as the continuative marker, because it is used to mark the continuance of a situation. In terms of their differences, *zhe* requires some background information to understand the content, whereas *zai* does not. This explains why *zhe* may sound incomplete. For instance, (Huang Meei-jin & Davis, 1989, p. 153):

1. Ta azi kan bao
S/he ZAIread newspaper
S/he's reading the newspaper
2. Ta kan zhe bao…
S/he read ZHE newspaper
(While) he/she is reading the newspaper…

Problems of the Aspect System

The aspectual analyst's Li and Thompson describe the particle *le* as "an event being viewed in its entirety" (Wolfgang, Ping, & Henriette, 2000, p. 730). Smith (1991) described the perfective aspect to mark the "present a situation as a single whole" and imperfective aspects to "present part of a situation with no information about its endpoints" (Wolfgang, Ping, & Henriette, 2000, p. 730). Although these definitions are accurate and well established, they do raise problems such as:

Boundedness and the Redundancy of le

According to Wolfgang et al (2000), Thompson (1968)

argued that the central meaning of *le* is to mark an event boundary. In Thompson's study, the author provided a detailed list of factors of what makes an event (or a situation) bounded: a definite object, a measure expression, a sentence being first in a series, etc; this means that *le* can only be used when these factors are present. Wolfgang, et al (2000) ask why the particle *le* should be added to a sentence if the boundedness of a situation is already indicated. Therefore, it would seem that the particle *le* has no independent functional value because it marks an event as bounded, when it is already bounded to begin with. In addition, the structure with and without *le* needs to be functionally equivalent due to the resultative verb constructions. The examples (Wolfgang, Ping, & Henriette, 2000) shown below are functionally equivalent:

1. Zhangsan xie-wan zhe-feng xin
Zhangsan write-finish this-CL letter
Zhangsan finished writing the letter
2. Zhangsan xie-wan-le zhe-feng xin
Zhangsan write-finish-Le this-CL letter
Zhangsan finished writing the letter

Nevertheless, there are some situations where the event being described cannot be semantically equivalent:

1. Zhangsan si
Zhangsan die
2. Zhansan si-le
Zhangsan die-LE
Zhansang died

The first sentence evidently does not sound right despite its context, while the second sentence makes perfect sense.

Realization of the Situation and Le

Since the function of the particle *le* cannot be successfully described, its real function is further analyzed. The particle *le* is used when people feel that "it is necessary to state the realization of a given action, especially when the realization is closed" (Wolfgang, Ping, & Henriette, 2000). For example, bounded verbs such as *si* "die" and *wang* "forget" are marked by the perfective aspect marker, *le*. However, these verbs can also be used in a irrealis mood when it is combined with a modal verb; for example, the sentence "ta yao-si le (he will die LE) will not work with the traditional definition of the perfective aspect. Therefore, the problem is not whether the situation is viewed in its entirety, but if the situation is presented as real. In addition, another observation was made regarding the realization of the situation meaning of *le:* in some situations, *le* denotes a habitual meaning. For example, xi yifu (he (Sunday) wash clothes) 'he washes clothes (on Sundays)'; when one adds the particle *le* to the sentence, it expresses that the situation has actually happened. As a result, it is evident that the definition of *le* is quite blurry, as many researchers are finding difficulties to define its function.

As previously stated, Mandarin is a language that does not contain any inflectional markers to express tense, person, number, aspect or mood, as it solely relies on aspect markers to express different temporal perspectives of an expression. The Mandarin aspectual system focuses on four aspect markers: *le, guo, zhe*, and *zhai*, which are divided into perfective (le and guo) and imperfective (zhe and zai). Each aspect marker has its own function, while also having similarities with others. At the same time, researchers have problems in delimitating functions of those aspect markers, especially the function of the particle *le*.

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Thoughts on Language

The magic of the tongue is the most dangerous of all spells. (E. G. Bulwer-Lytton)

Language is an organism. To digest it one must be, paradoxically, swallowed up by it.(Shemarya Levin)

When I cannot see words curling like rings of smoke round me I am in darkness, I am nothing. (Virginia Woolf)

Language is a finding-place, not a hiding-place. (Jeanette Winterson)

Personally I think that grammar is a way to attain beauty. (Muriel Barbery)

Language has no legs but runs over thousands of miles. (Korean proverb)

Language is the main instrument of man's refusal to accept the world as it is. (George Steiner)

Man was given the gift of language in order to be able to hide his thoughts. (Talleyrand)

The limits of my language mean the limits of my world. (Ludwig Wittgenstein)

Language is a poor bull's-eye lantern wherewith to show off the vast cathedral of theworld. (R. L. Stevenson)

Language is man's deadliest weapon. (Arthur Koestler)

Language is half-art, half-instinct. (Charles Darwin)

Language is a city to the building of which every human being brought a stone. (R. W.Emerson)

Language is the house of Being. In its home man dwells. (Martin Heidegger)

The unconscious is structured like a language. (Jacques Lacan)