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Language attrition in bicultural bilinguals: Evidence from Neo-Aramaic animal metaphors

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Animal-based metaphors are ubiquitous in natural languages with distinct cross-cultural implications. In this study, these conventional or dead metaphors, so to speak, are used as a tool to measure language erosion and cultural integration. We assumed that Neo-Aramaic-English bicultural bilinguals (NA-E) and Canadian-English speakers (CE) have the linguistic and cultural capacity necessary to establish concerted conceptualizations and culturally agreed upon connection between the target and source domain of these metaphors. This assumption was based on the fact that animals are one of the main categories of language vocabulary that native speakers learn during the early stages of their linguistic development. We selected widely known animal metaphors- 13 had identical meanings and 11 had culturally distinct meanings. The results showed no significant difference between the two groups as to the meaning of identical metaphors and animal gender associations. However, we found a significant statistical difference in the good and poor match of the culturally distinct metaphors. Animal gender associations did not show any significant difference. The frequency scale did not show any significant difference except for 'always' with distinct metaphors.

Key words: Neo-Aramaic, cultural integration, animal metaphors, language attrition.

INTRODUCTION

In this study, we target a figurative aspect of a minority language (that is, Neo-Aramaic) and the role of host culture in language erosion. It is widely known that the Canadian society is made up of a large number of ethnicities which resulted in developing a mosaic cultural system.

More often than not, individuals belonging to distinct ethnicities and having various linguistic and cultural backgrounds are encouraged by the general inclusive atmosphere to retain their cultural and linguistic identity. However, it is unclear whether such kind of cultural pluralism strengthens or weakens the heritage language of the minority group in question.

Therefore, we assume that the hegemonic culture puts increasingly potential pressure on certain aspects of language which creates a state of disequilibrium between minority and majority language. In language-centered cultures minority, group members usually put emphasis on their heritage language. That said, apart from language there might exist other cultural aspects that would greatly contribute to and clearly delineate the boundaries of existence, identification and future

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continuity of the minority group.

When two languages are in contact situation, it is customary to borrow or transfer (non)linguistic forms and components from source language (L1) to target language (L2) (Aikhenvald, 2003; James 1980; Heine and Kuteva, 2005; Lado, 1957; Muysken, 2000; Thomason and Kuafman, 1988; Thomason, 2001). On the microlinguistic level, lexical, phonetic, and phonological transfer or borrowing from L1 to L2 usually causes difficulties for second language learners.

However, research in first and second language acquisition proved that high-frequency linguistic structures are acquired faster and earlier (Ellis 2002; Goodman et al., 2008). In fact, the high frequency of these structures facilitates the process of borrowing or transferring from one language to another (Pagel et al., 2007). It is disappointing to admit that high-frequency facilitation hypothesis fails to explain how animal metaphors, which are characterized by low frequency, are transferred in contact situation from L2 to L1.

Little empirical work has been done on the influence of L2 on L1 in childhood bilingualism. Wong-Fillmore (1991) showed evidence from interviews with parents and stated that ''as immigrant children learn English, the patterns of language use change in their homes, and the younger they are when they learn English, the greater the effect'' (p. 341).

Pavlenko (1999, 2000) and Pavlenko and Jarvis (2000) dealt with L2 influence on L1-based concepts in post-puberty or late bilingualism, where L2 learners borrow lexical item to express specific concepts or refer to new objects that do not exist in their cultural cognition (for contact neologism see Otheguy and Garcia, 1993).

In this study, we investigate a transfer that occurs on the macrolinguistic level where bilingual speakers successfully transfer L2 sociopragmatic knowledge to their L1. We assume that NA-E bilinguals stop being an *active part* of the cultural and linguistic realm by eschewing the dynamic process of formalizing and expressing the concerted conceptualizations of the cultural group to which they belong. We use animal metaphors to examine the effect of this conceptual transfer on language erosion. The study sheds light on language attrition that is caused by 'reverse' or 'backward' transfer from L2 to L1 (Cook, 2003). Succinctly, it is not a semantic transfer that deals with the lexical meaning of words, but rather a conceptual transfer that is essentially based on speaker's world knowledge and experience drawn from cultural interaction or enculturation so to speak.

Metaphor: A multidisciplinary perspective

In *Poetics*, Aristotle (350 B.C.E) describes metaphor as "strange...unusual, different from the normal idiom... and the mark of the genius". This said, most investigators attest that metaphor is both a ubiquitous phenomenon and intransigent problem in language.

In line with this, Lakoff and Johnson (1980) claimed that metaphor is not only 'pervasive' in our daily interactions but also in our 'thought' and 'action'. They bluntly stated that "our ordinary conceptual system, in terms of which we both think and act, is fundamentally metaphorical in nature" (p.3).

In other words, people conceive the social world through conceptual metaphors, which enable them to understand abstract or target concepts using knowledge of dissimilar, typically more concrete or source concepts. Lakoff (1993) further claimed that "... the locus of metaphor is not in language at all, but in the way we conceptualize one mental domain in terms of another" (p. 203). For Gibbs (1994) "...human cognition is fundamentally shaped by various poetic or figurative processes" (p.1).

In social cognition, some researchers have emphasized that metaphor is a top-down knowledge and placed little emphasis on the constraints that shape metaphor from the bottom up. According to Landau et al. (2010) "people are able to use pieces of knowledge about the source concept as a structural framework for reasoning about, interpreting, and evaluating information related to target concept" (p. 1046).

To summarize, metaphor is a vital part of our conceptual network which we draw heavily on to construe and extract abstract concepts from concrete ones. It is worth noting that according to the semantic model (within generative grammar framework) of Katz and Fodor (1963) figurative language including metaphor was labelled deviant and semantically unacceptable.

The basis of animal metaphor

A considerable number of people conjecture that humans and animals are two different organisms. However, a sizable number of this population considers humans superior and more important than animals, because humans are apparently privileged to drive cars, wear fancy suits, live in skyscrapers, own businesses, read, and write, etc.

Nonhuman animals, so to speak, are not entitled to indulge in such human activities. If we consider the list of things that humans can do, we discern that millions of people do not have the capability to access or execute what is considered germane, and probably unique, to humans such as literacy. A deeper inspection would reveal that humans and animals share a significant number of faculties and even some emotions.

Contrary to Descartes (1637/1988) and Davidson (1985), extensive research has been carried out to prove that animals do not lack mental ability. Some researchers have shown that many animals are able to think, but they do not possess the versatility that characterizes human

consciousness. They have ‘perceptual consciousnesses’ or a basic version of the human consciousness. Natsoulas (1983, p.29) described it as “the state or facility of being mentally conscious or aware of everything.”

Savage-Rumbaugh et al. (1998) used Yerkes Laboratory keyboard system to show that chimpanzees can communicate conscious thoughts and emotions. According to Seeley and Visscher (2003), even worker bees possess this kind of perceptual consciousness. Roberts (1996) defends the idea that both humans and animals experience fear but differently “...we and the small dog have emotions both of which can be called fear, they are nevertheless different emotions, with different diagnostic and therapeutic implications” (p.155).

Some zoologists like Dawkins (1993) adopted a Darwinian approach to link humans and animals in a chain or ring species. Dawkins (1993) claims that our speciesist and discontinuous mind obfuscate the fact that "a fetus can be “half human” or “a hundredth human”. “Human”, to the discontinuous mind, is an absolute concept. There can be no half measures. And from this flows much evil" (p.37, quotes original). According to Dawkins (1993), the chimpanzee who lived in Africa five and seven million years ago is our cousin. On the other hand, the *New Scientist*, in its editorial of 13 February (1999), conspicuously vindicated the idea that genetic comparison does not justify the claim that gorillas or chimpanzees and humans are virtually identical.

Unfortunately, it has become fashionable to stress that chimpanzees and humans must have staggeringly similar psychologies because they share 98.4% of their DNA. But this misses the point: genomes are not like cake recipes... A creature that shares 98.4% of its DNA with human is not 98.4% human, any more than a fish that shares, say, 40% of its DNA with us is 40% human...Take DNA as your measure of sentience and moral worth and the chemical connectedness of life ensures that you soon end up extending honorary personhood to the rat and haddock. (p.3)

Marks (2002) rejected the idea of comparing genes and pointed out that "All humans have a pair of large chromosomes (#2) that no chimpanzee has. It is a correlate, not a cause, of humanness..." (p.245). However, there has been a consensus among researchers that linguistic competence (mental grammar) and abstract thought are the two faculties that make *homo*, and *homo sapiens* in particular, unique.

Acculturation and cognitive patterns

Motivated by their delusionary conventional usage, predictability and allegedly universal nature, which according to research in cognitive linguistics, stems from the idea that figurative conceptualizations are grounded in embodied human experience (Lakoff and Johnson, 1980; Lakoff, 1987), according to Black (1962), the British-American philosopher, unempirically labelled animal metaphors 'dead' more than fifty years ago.

On the one hand, cross-cultural studies of metaphor showed that conceptualizations could differ cross linguistically because the same animal may carry different images[1], and one concept can be associated with two different animals (Ansah, 2011; Kövecses, 2000; Talebinejad and Dastjerdi, 2005).

On the other hand, like other types of metaphor, conceptualizations of animal-based metaphors are shared, however *not* necessarily equally shared by all the members of a cultural group, because they are governed by individual experiences and predilections.

Succinctly, these members share cultural cognition that delineates, delimits and determines whether their participation in the cognitive process of conceptualization as members of the cultural group is profound or superficial. Therefore, the Neo-Aramaic[2] linguistic identity stands out when the NA-E bilingual thoroughly engages in the intergenerational conceptualization process.

However, this identity peters out when the inter-generational transmission of cultural conceptualizations is not consummately marshalled due to spontaneous cultural assimilation or '*acculturation*' (Redfield et al., 1936). We agree with Berry and Kostovcik (1990) that acculturation exerts considerable amount of pressure on one group, viz., NA-E bilinguals, more than the other.

In the same vein, some animal metaphors come to acquire novel senses and connotations even among the members of the same speech community. Owl, for example, in one Neo-Aramaic variety is ~~a~~ used to describe someone who is considered a jinx and whose presence portends a bad omen. However, in another variety, owl connotes physical ugliness or obtuseness.

Raccoon, for example is usually associated with thieves or robbery, but among the youth, this sense has been replaced by the image of a girl who wears a lot of black eyeliner. However, one cannot just turn a blind eye to the cognitive and social influence that metaphor in general and animal metaphor in particular have in the way we dissect the world around us.

PEOPLE ARE ANIMALS metaphor

It is important to give a brief account of the Neo-Aramaic distinct animal metaphors, as we assume the identical ones have straightforward meanings before proceeding to the experimental part. In our account, we will allude to the fact that Neo-Aramaic animal-based metaphors provide a balanced, non-stereotypical image of both men women, unlike the image represented by the English culture where woman is viewed as inferior to man (cf.

[1] For our experimental purposes, either meaning was considered a good match.

[2] NA refers to a group of language varieties that are descendants of Middle Aramaic. NA dialects of the North-Eastern NA (also known as NENA) are spoken in northern Iraq, northwestern Iran and southeastern Turkey. The study attempts to shed light on Christian dialect spoken in a town in the north of Iraq.

Hines, 1999; Nilsen, 1996; López-Rodríguez, 2009, 2016). As a matter of consistency, we will simply follow the order used in survey format in Appendix 1.

1. According to Neo-Aramaic culture, somebody who goes to bed early is *chicken*. This image is derived from the direct contact with this domestic animal according to the nature and style of living in their rural area. Morphologically, the name of the animal[3] is inherently marked for feminine gender, but metaphorical use grants it permission to be freely used with masculine nouns. The English sense, which is, 'timid' or 'coward', of this metaphorical expression is completely different from the Neo-Aramaic one.
2. Contrary to the English cultural beliefs, Neo-Aramaic *owl* is loaded with negative connotations. Unlike the wise English *owl*, it is a source of jinx, obtuseness and homeliness, probably due to its nocturnal nature. In fact, members of this cultural group presume that there is a strong correlation between a bad luck bringer and obtuseness. Morphological marking for masculine and feminine is present in metaphorical use, but, in some Neo-Aramaic varieties, speakers borrow the feminine Arabic form and use it neutrally.
3. *Bear* is a big and strong animal, and is usually associated with aggressive behaviour, but for Neo-Aramaic speakers, *bear* signifies feeble-mindedness. Feminine and masculine gender markers are used interchangeably without interrupting the metaphorical sense. In some contexts, *bear* can offensively refer to a fat female.
4. The *sheep* image in Neo-Aramaic is widely known as a symbol of innocence and amicability with positive connotations that are restricted to males. The metaphorical image related with *sheep* in the sense of innocence is not quite common in Canadian culture, because it has another sense that refers to a timid or dependent individual.
5. In Neo-Aramaic, a prolific woman is a *rabbit*. It carries a slightly negative connotation and is uniquely used to describe women with multiple successive births. It is slightly negative, because having many kids in the family is, in fact, a source of strength.
6. *Louse* has negative connotations as it refers to a weak person with no initiatives. *Louse* is a feminine noun, but can also describe a masculine referent. On the other hand, Canadians use *louse* to describe a boorish person.
7. *Gorilla* is another animal-based metaphor that represents a distinct image in the two languages. When a man is hairy, he is a described as a *gorilla*. It can also be used to refer to a noisy male or female in spite of being a feminine-marked noun. In English, *gorilla* carries negative and positive connotations; first, it is used derogatively to refer to a large black male; second, the others sense implies a positive description of man's muscular, toned up physique.
8. The image of *cat* in Neo-Aramaic, like Arabic, is based on the myth that cats have seven lives. In this sense, it is similar to the English *cat* which has nine lives. It is interesting that neo-Aramaic, unlike English, has stretched this mythical sense and employed it metaphorically; therefore, it is quite common to hear something like "s/he is a *cat*, s/he cheated death on several occasions." The context determines whether the metaphor has commendatory or derogatory implications.
9. The metaphorical image of *pig* evokes two contradictory senses. In some Neo-Aramaic varieties, *pork* is not prohibited; therefore, *pig* does not imply any negative connotations. The animal is jocularly associated with strong, healthy and sometimes spry old people. This positive image is not arbitrarily constructed, as it originates from the fact that *pig* is not domesticated in this culture, which eliminates the English image of *pig*'s gluttony, untidiness and dirtiness associated with a pigsty. People are more familiar with wild boars which are hunted in the wilderness.
10. The *Fish*'s image is directly linked with water. This metaphorical sense refers to people who take great pleasure in swimming, bathing, splashing, sprinkling, etc. *Fish* is a feminine noun in Neo-Aramaic but can be used with masculine nouns on par. The metaphorical sense, in English, differs dramatically from the Neo-Aramaic one. An inexperienced and fledgling person is a *fish*, which apparently has a negative connotation.
11. *Mule* carries another contradictory image in the two languages. *Mule* is known as a draft animal in both cultures. However, *mule* has kept its status as a strong, hard-working animal in Neo-Aramaic, but its metaphorical sense has shifted, in English, to become associated with stubbornness. Morphologically, *mule* is a masculine noun and thus its metaphorical use is restricted to men.

METHODOLOGY

Experimental design and instrument

The experiment consisted of two parts which were randomized throughout the survey to enhance the statistical validity of our results- we capitalized them in Appendix 1 for convenience. The first one was made up of 11 animal metaphors.

These metaphors have distinct meanings in Neo-Aramaic and English. Chicken, for example, is conceptualized as a weak creature which resonates with some human characteristics whereas in the NA culture the conceptualization of this animal is different. In NA, early sleepers are usually referred to as chickens.

The second part consisted of 13 identical[4] animal metaphors. Speakers from the cultures in question have equivalent conceptualizations of these animals, for example, untrustworthy or slippery people are described as snakes. We focused on animals that are quite familiar and usually metaphorically used in both cultures; therefore, animals, such as a raccoon, dolphin, panda, etc. were excluded.

[3] Animal-bird distinction is irrelevant to our work; therefore, we will use animal as a hypernym.

[4] Henceforth, 'Identical' and 'equivalent' will be used interchangeably.

In addition to consulting metaphor dictionaries, we interviewed six native Canadian English speakers (aged +50) to confirm those with dictionary entry and to investigate the meaning of those that we could not find in dictionaries. There are no Neo-Aramaic dictionaries because Neo-Aramaic is only spoken. We interviewed seven Neo-Aramaic native speakers (aged +60) to verify the meaning of the metaphors we used in our on-line survey.

We used animal metaphors as a means to examine the effect of learning a second language (i.e. Canadian English) on core concepts in the first language (that is, Neo-Aramaic). This will reveal the influence of cultural integration on native or primary language. The study dealt with the nominal use of animals in metaphors, for example, 'X is a pig' (Appendix 1). Adjectival animal metaphors, for example 'shrewish', 'foxy', and 'mousy', etc. and Verbal metaphors, such as 'X wanted to white ant Y' or 'X was horsing around with Y' were not tackled.

The survey consisted of three main questions. The first one required providing appropriate adjectives to describe the human characteristics that each animal implies. As expected, there was a wide range of adjectives associated with each metaphor. In order to tease apart these various adjectives, based on the established connotations of the selected animal metaphors, our analysis treated the adjectives as subordinates subsumed under the superordinate term (that is, the animal).

'Scorpion' for example, subsumed 'sly', 'untrustworthy', 'sneaky' and 'wicked' which were treated as a 'good match' whereas other adjectives, such as 'fierce', 'strong', and 'withdrawn' were labelled as a 'poor match'. The second question was about gender identification- each animal metaphor can be used to refer to male, female or both. The third question dealt with frequency. We asked the participants to give a frequency rating for each metaphor by depending on a predesigned, descending scale that consisted of six options: always, usually, sometimes, rarely, never, and I do not know this expression.

Subjects

Two groups participated in the study. The first one consisted of 30 NA-E bilinguals[5] who volunteered to take part in the study. We excluded three NA participants because they did not identify themselves as native NA speakers. The second group was made up of 30 CE monolinguals that were granted one credit in one of the courses upon signing up for the study. Uncompleted surveys were not included in our data. To ensure partial homogeneity among participants, both groups aged between 20 and 28 in order to get a sensible response to our linguistic questions about animal metaphors. The data collected from the old speakers were not used for statistical purposes. All the CE participants were undergraduate students at McMaster University during the time of conducting the survey- a few NA-E bilinguals were McMaster alumni.

Procedure

The participants had to complete an on-line survey on animal metaphor (Appendix 1). The survey takes between 30 to 45 minutes to complete. However, participants were not obliged to answer all the questions in one session as they had the option to save their uncompleted survey and come back at a later time. The preamble statement gives a brief account about the survey and its objectives (Appendix 2). Before taking the survey, the participants had to read the consent form and agree to participate (Appendix 3). Then, they answered some demographic questions.

[5] NA-E bilinguals are immigrants who arrived in Canada when they were young children. Most of them have at least 10 years of natural exposure. They did not get any bilingual education at school.

RESULTS

The nonparametric equivalent of a two-independent samples t-test (that is, the Wilcox rank-sum (two-tailed) test) was used in the study statistical analysis.

For the identical metaphors, (see Appendix 1, bolded), the good match scores of NA-E bilinguals (M*dn* 50) and CE speakers (M*dn*60) did not differ significantly at .05 level as shown in the plot below (Figure 1), *W*= 86.5, *p*=0.9, *r*= -0.02. 50% of the good match scores lied between 70 and 37, which did not differ from the scores of CE speakers whose scores were between 70 and 33.

This suggests that NA-E bilinguals and CE speakers are equally cognizant about this kind of metaphors. The plot in Figure 1 shows the convergence between both groups and their ability to create a kind of linkage between metaphors and human characteristics.

We did not find a significant difference between the poor and zero match scores of both groups, (M*dn*=27) for NA-E speakers did not differ significantly from (M*dn*=30) for CE speakers, *W*= 84, *p*= 1, *r*= -0.02. CE speakers demonstrated more consistency than NA-E bilinguals did in this condition; their *IQR* was 13 relative to their NA peers (*IQR* 20). Again, half of the scores were between 37 and 17 for NA-E bilinguals and between 33 and 20 for CE speakers.

The spread of the data was very similar in case of their zero match (that is, they refrained from giving any description), (M*dn*= 17) for NA-E bilinguals and (M*dn*=13) for CE speaker, *W*=77.5. *p*= 0.7, *r*= -0.07 as shown in (Figure 2). These results index that the two groups not only did they share the same cultural perspective regarding what these conventional metaphors mean but also demonstrated the same level of cultural leaning as to providing wrong meanings and refraining from or failing to provide any.

We noticed more convergence between both groups in associations of gender with these metaphors. It is an indication that both groups share the knowledge required to establish a correlation between the genders in two distinct domains: the animal (source domain) and the human (target domain). All the panels in Figure 3 show an overlap suggesting that NA-E bilinguals and CE speakers do not differ significantly at 0.05 level. For choosing the correct gender, for both groups (M*dn*=53), *W*= 94.5, *p*= 0.6, *r*= -0.07. However, mismatch scores of both groups were lower than their good match scores. NA-E bilinguals made more mistakes and thus scored higher (M*dn*=30) than CE speakers (M*dn*=23), *W*= 66.5, *p*=0.4, *r*= -0.2.

Both groups demonstrated a pattern in gender identification as they got high scores for matching up gender with the metaphor. However, their scores tapered off in the other two conditions. NA-E bilinguals showed more consistency than CE speakers did in choosing

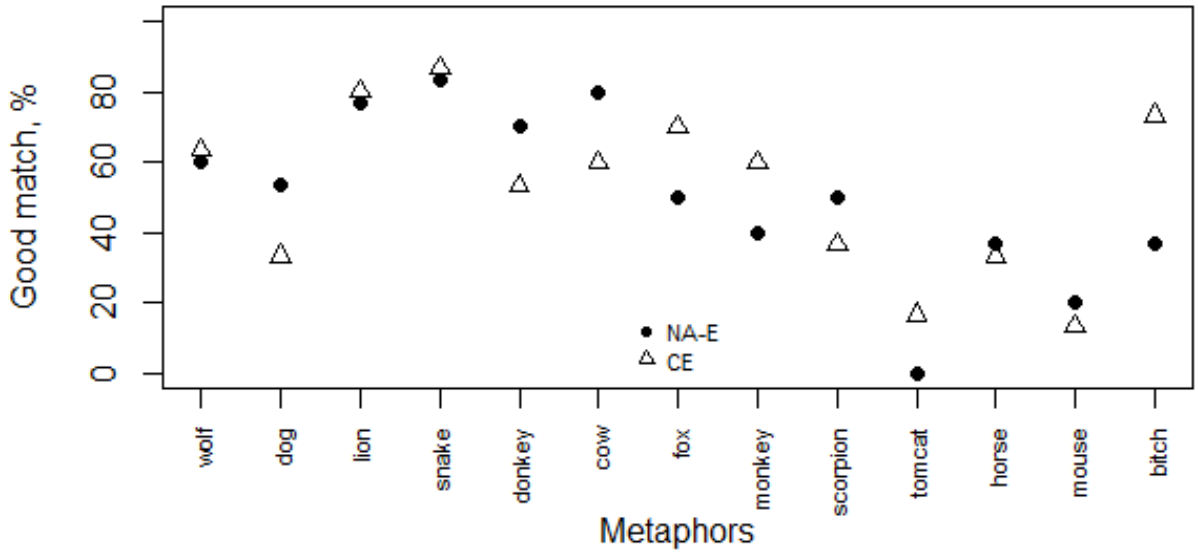

Figure 1. NA-E and CE good match of culturally equivalent animal metaphors.

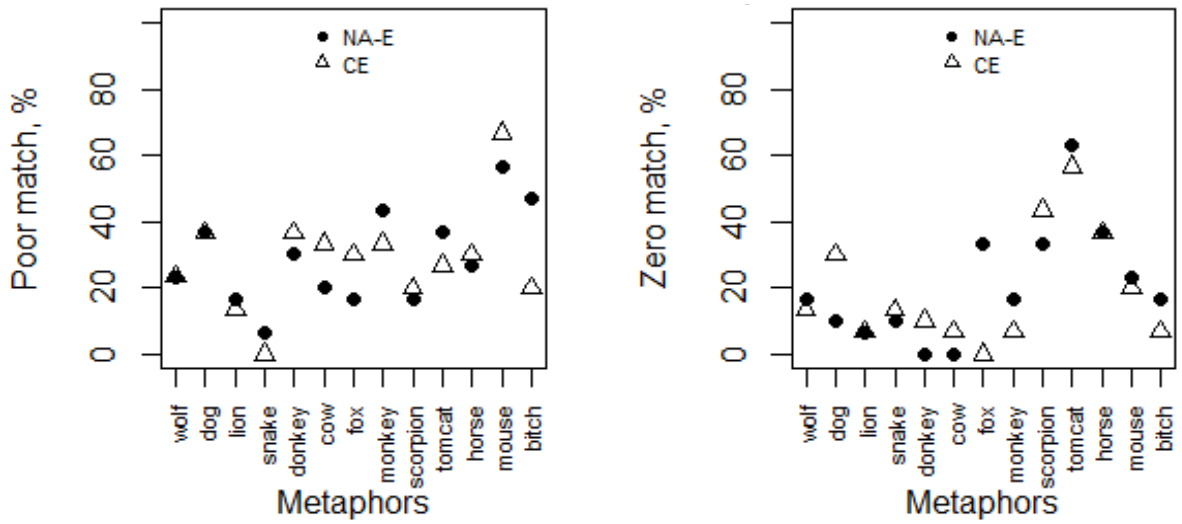

Figure 2. NA-E and CE poor and zero match of culturally identical animal metaphors.

gender that did not match up with the metaphor, because their *IQR* was 13 compared to 20 for CE speakers.

We observed a similar tendency in their behaviour, as they failed to properly associate either gender with the metaphors in question (zero gender match). Again, NA-E bilinguals scored a bit higher than CE speakers did, suggesting that they did not know which gender should be used in this condition. However, failure to provide gender did not differ significantly for NA-E bilinguals (M*dn*=17) and CE speakers (M*dn*=13), *W*=76.5, *p*= 0.7, *r*= -0.08.

Distinct metaphors showed that there was a significant difference between NA-E bilinguals and CE speakers at 0.05 level. The good match in Figure 4 show that CE speakers scored higher (M*dn*=47) than NA-E bilinguals (M*dn*=10), *W*=100.5, *p*= 0.01, *r*= -0.48. Half of their scores were between 73 and 25 whereas the 50% of NA-E bilinguals scores were lower (22- 5).

In other words, CE speaker were better than NA-E bilinguals at associating transformable characteristics of the target domain with the source domain. We noticed that NA-E bilinguals had less variability (*IQR*=17) than CE speakers did (*IQR*= 50), which indexes more agreement or a general tendency within this group to provide less

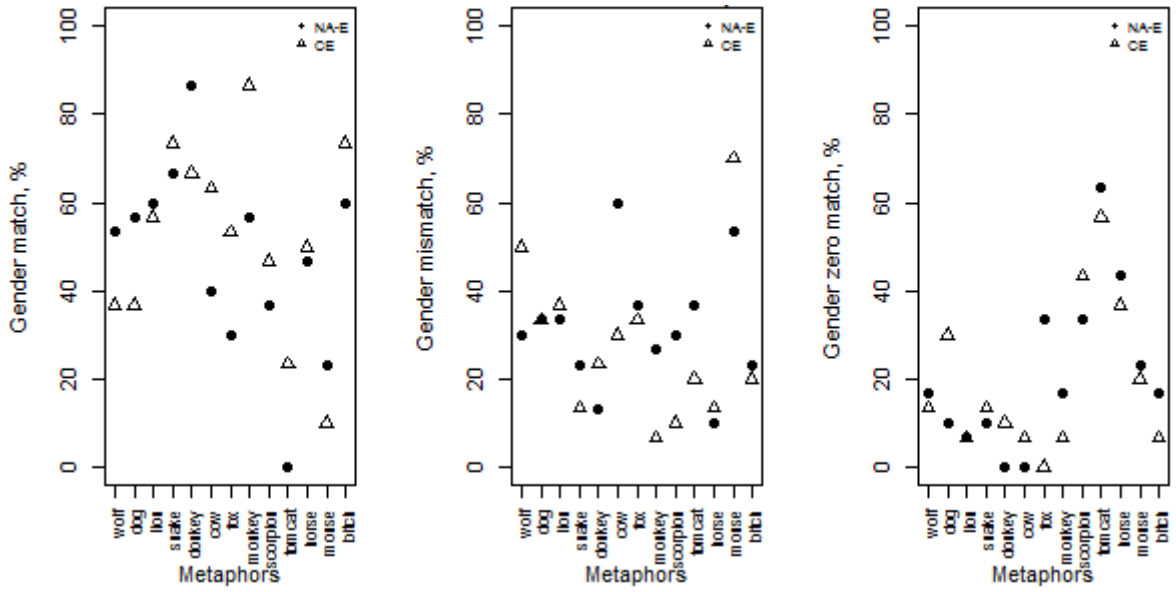

Figure 3. Three levels of gender agreement with culturally identical animal metaphors.

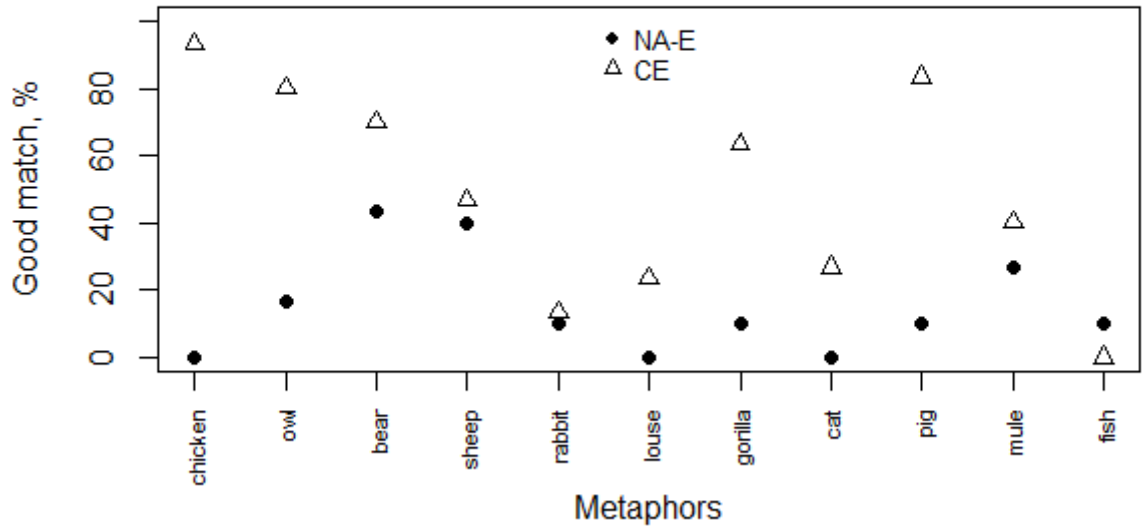

Figure 4. NA-E and CE good match of culturally distinct animal metaphors.

good matches. Figure 4 shows the good match scores of both groups for each distinct metaphor.

CE speakers were well informed about animal metaphors relative to NA-E bilinguals, because they scored lower throughout the other two conditions (that is, giving poor matches or providing none). NA-E bilinguals scored higher on poor match condition, we did find a significant difference between both groups as left panel in Figure 5 shows, NA-E bilinguals (M*dn*=43) and CE speakers (M*dn*=17), *W*= 21, *p*=0.01, *r*=-0.47. NA-E bilinguals preferred not to associate any description with this kind of metaphors more frequently than CE speakers did (Figure 5 right panel). Their (M*dn*=37) was higher than that of CE speakers (M*dn*=27), *W*= 47, *p*= 0.4, *r*= -0.16.

The low scores of NA-E bilinguals (Figure 4) in distinct metaphor good match condition explain part of the variability in their geneder match for these metaphors (*IQR*= 42 compared with 28 for their Canadian peers). However, there was not a significant difference between NA-E blinguals (M*dn*= 40) and CE speakers (M*dn*= 50) as shown in Figure 6, *W*= 75, *p*= 0.3, *r*= -0.2. Regarding

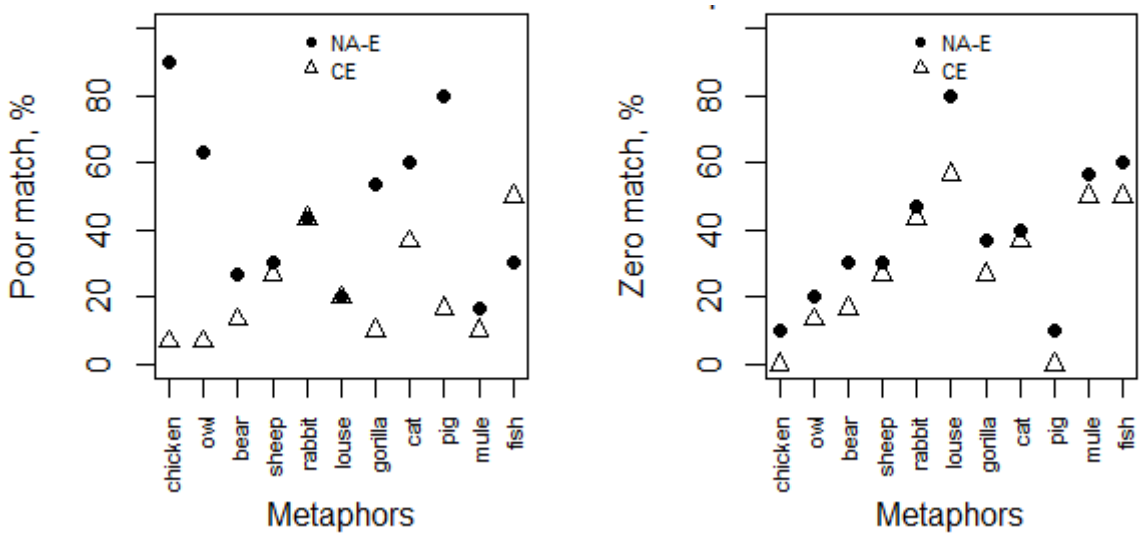

Figure 5. NA-E and CE poor and zero match of culturally distinct animal metaphors.

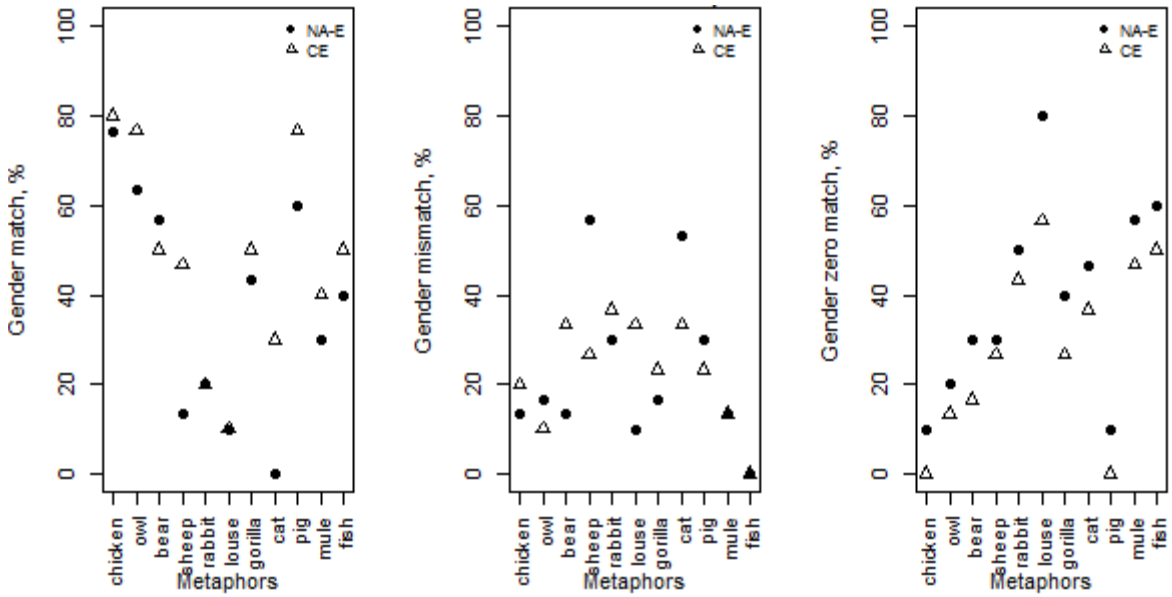

Figure 6. Three levels of gender agreement with culturally distinct animal metaphors.

gender mismatch NA-E bilinguals scored lower (M*dn*= 17) than CE speakers (M*dn*= 23) did, but they shared the same value of *IQR* (17), *W*= 69, *p*=0.6, *r*= -0.11.

NA-E blinguals did not opt for either of the gender options more frequently than CE speakers. For the condition of gender zero match, they scored as high as their gender match condition. However, there was not a significant difference between both groups at .05 level. For CE speakers median was (27) and for NA-E bilinguals (M*dn*=40), *W*= 43.5, *p*= 0.3, *r*=-0.2. The plots in Figure 6 give a detailed description of gender associations.

NA-E blinguals and CE speakers did not score high on the frequency scale. Apparently, there was an ascending pattern that showed a shift towards higher scores as participants moved away from high frequency to low frequency options (Figures 7 and 8). We did not find a significant difference between NA-E bilinguals and CE speakers on the frequency scale- all the *p*-values were above the significance level of 0.05. Statistical results obtained from Wilcoxon signed-rank test are summarised in Table 1.

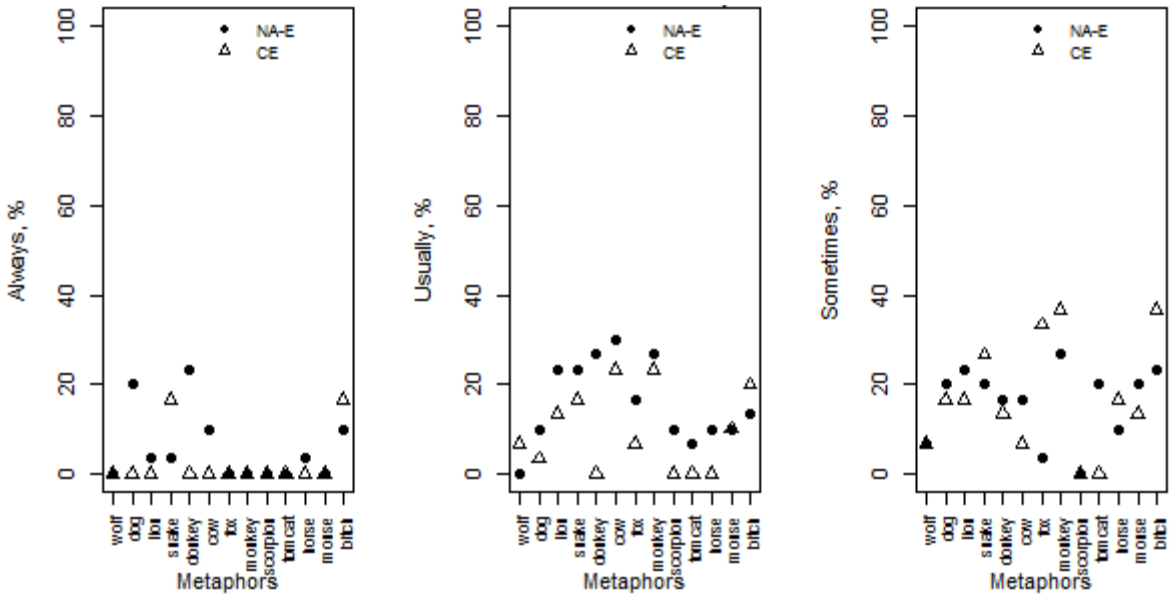

Figure 7. Three levels of usage frequency with culturally identical animale metaphors.

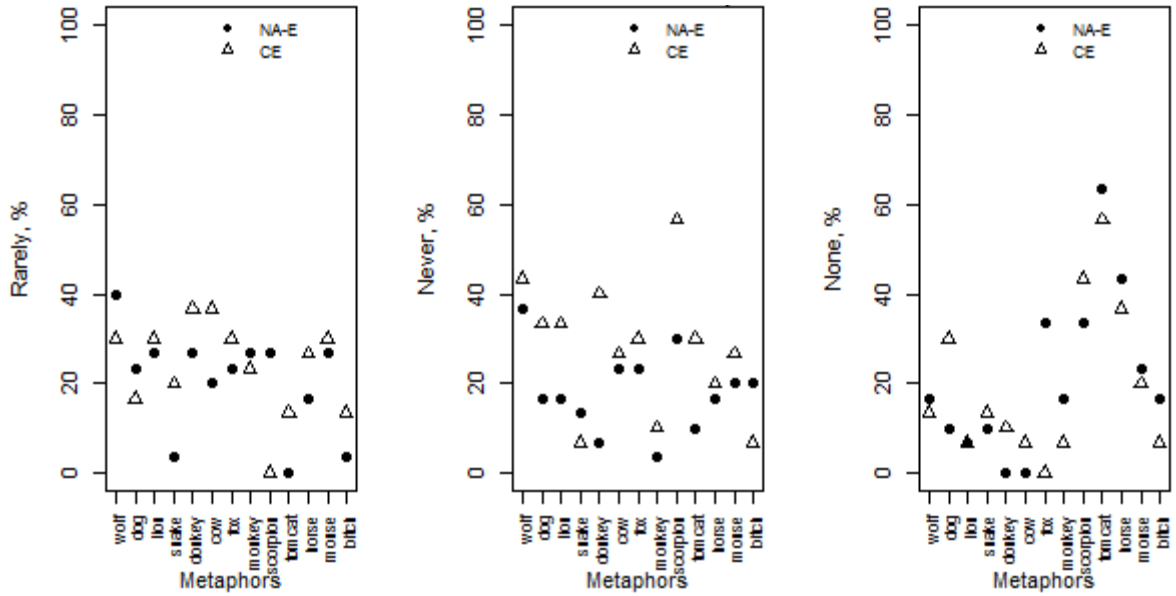

Figure 8. Three levels of decreasing frequency with culturally identical animal metaphors.

We noticed that the frequency patterns of distinct metaphors are similar to those associated with identical metaphors. The scores of NA-E bilinguals and CE speakers took an ascending trajectory towards the lower end of the frequency scale. NA-E bilinguals and CE speakers did not differ significantly in their ratings on the frequency scale (Figures 9 and 10).

In spite of the fact that both groups scored considerably low , we found a significant difference in their ratings of 'always' as shown in Table 1. This can be attributed to their general tendency to score higher on 'usually' and 'sometimes'.Even with 'rarely' and 'never', NA-E blinguals seemed to score relatively lower than CE speakers.

DISCUSSION

The study presented in this article provided empirical evidence in support of the claim that the dominant culture of the majority group could influence the linguistic

Table 1. The significance obtained from wilcoxon test for the frequency of identical and distinct metaphors.

Degree of frequency Identical metaphors	*W*	*p*-value	*r*	Degree of frequency distinct metaphors	*W*	*p*-value	*r*
Alwyas	55	0.07	-0.326	Always	31.5	0.02	-0.422
Usually	50	0.07	-0.326	Usually	56	0.7	-0.054
Sometimes	80.5	0.8	-0.377	Sometimes	68	0.6	-0.091
Rarely	102	0.3	-0.165	Rarely	65.5	0.7	-0.061
Never	121.5	0.06	-0.348	Never	86	0.09	-0.309
None	76.5	0.7	-0.075	None	47	0.4	-0.162

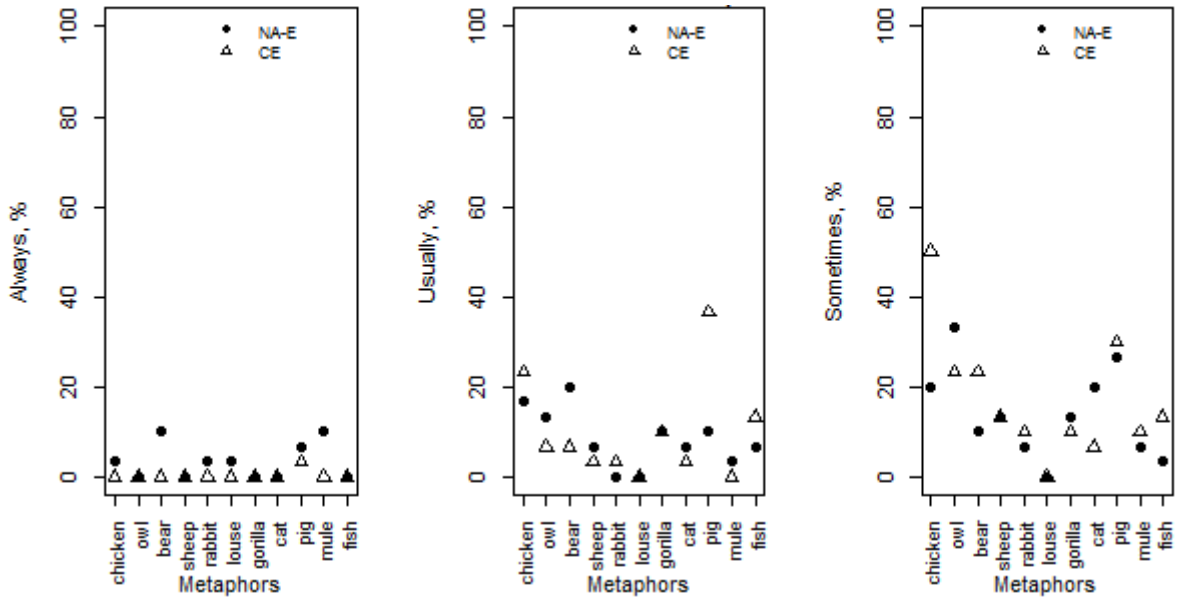

Figure 9. Three levels of usage frequency with culturally distinct animal metaphors.

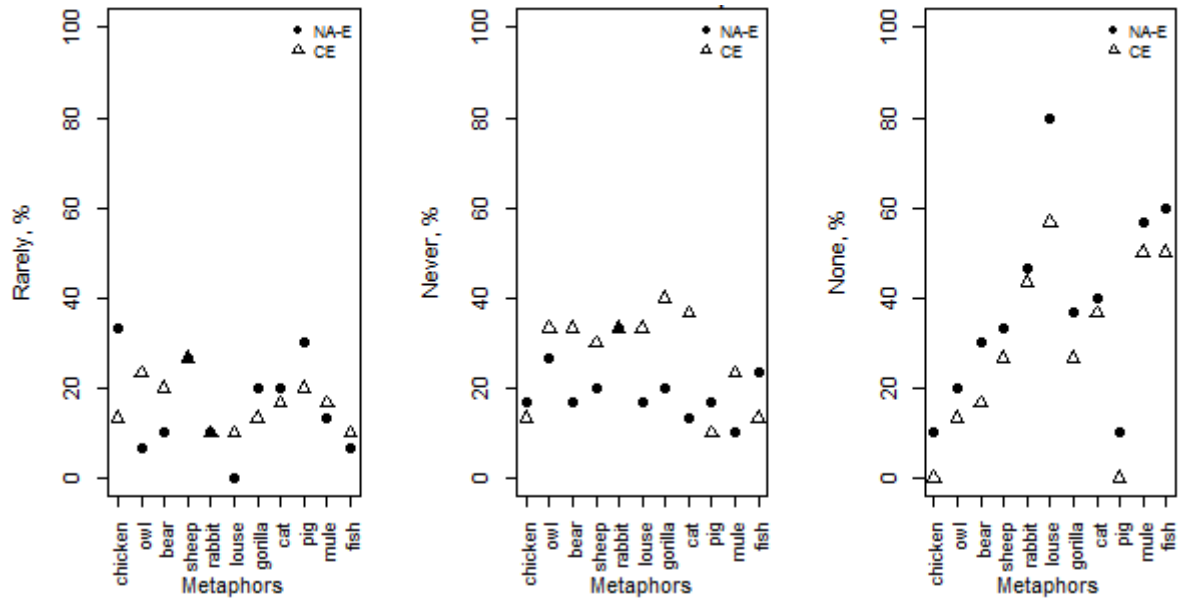

Figure 10. Three levels of decrease frequency with culturally distincy animal metaphors.

decision of the minority group on the macrolinguistic level. First, we discuss the influence observed in the equivalent figurative meaning of a set of metaphors to show that NA-E bilinguals and CE monolinguals exhibit the same degree of pragmatic competence.

The cultural cognition of a speech community is the main source and key element in shaping and developing its pragmatic competence. The influence of culture was evident in the first condition where NA-E bilinguals and CE monolinguals had similar conceptualizations of the culturally equivalent metaphors.

In the same vein, NA-E bilinguals and CE monolinguals showed other signs of cultural convergence when they both could not associate the animal's name with its figurative meaning. In the second part of the condition, we looked at how good were the participants of both groups in associating gender with the connotative meaning of the animal's name.

Again, both groups demonstrated a highly comparable level of sociopragmatic knowledge which points towards more awareness of such kind of figurative language use. As we pointed out in section 4 earlier, some animal metaphors have more than one figurative meaning associated with them and, consequently, require a shift in assigning gender.

For example, *fox* has two distinct figurative meanings: clever or crafty and attractive or sexy. The former sense is freely associated with both male and female whereas the latter is restricted to females only. That said, we noticed that both groups were equally involved in the nitty-gritty of animal gender assignment for culturally equivalent animal-based metaphors.

Second, we traced the effect of cultural cognition on a set of culturally distinct animal-based metaphors. CE monolinguals outperformed NA-E bilinguals in this condition because NA-E bilinguals were unable to guess at the figurative sense of the metaphors in question. NA-E bilinguals' conceptualization of these metaphors was motivated by the cognitive cultural patterns prevalent in Canada. Therefore, NA-E bilinguals' conceptualizations were not a matter of guesswork as such but rather a constellation of figurative computations derived from their adherence to the dominant cultural values.

NA-E bilinguals were informed that they were chosen to participate as native NA speakers and that the survey was about the figurative meaning of NA animal metaphors. However, NA-E bilinguals failed to conceptualize the culturally distinct animal metaphors as native NA speakers. Instead, they were better than CE monolinguals in providing incorrect figurative meanings of the NA metaphors.

The poor performance of NA-E bilinguals in this condition can be attributed to the fact their conceptualizations of these metaphors were solely based on the Canadian image of animals. Succinctly, it all boils down to one fact: NA-E bilinguals seem to have imbibed a set of cultural beliefs typical of the Canadian society which led to a shift in their cultural cognition patterns.

Gender assignment for the culturally distinct metaphors and usage-frequency test for both sets of metaphors did not provide conclusive evidence that could further support our hypothesis. However, there was one exception to this generalization as regards the use of 'always' with the culturally distinct metaphors. By scrutinizing the data, we found out that four NA-E bilinguals (mean age 27) were responsible for this shift. We reason that the younger the individual the great the effect of culture.

CONCLUSION

This study considered the role that culture, as a source of our shared representations, may play in language attrition and cultural assimilation. The significant difference and low scores in the good match of distinct metaphors stem from the fact that NA-E bilinguals were motivated by their profound participation and involvement in the cognitive process of conceptualizing animal-based metaphors through adopted acculturation patterns that play an important role in their disengagement from their NA cultural cognition.

NA-E bilinguals were not able to establish felicitous associations between target and source domain according to their culture, because they employed borrowed images and conceptualizations that are different from their NA-E cultural practices and beliefs. The hypothesis of adopted acculturation patterns also explains the poor performance of NA-E bilinguals in the other two conditions related to distinct metaphors (that is, poor and zero match).

The obtained statistical results bolster up the idea that the intergenerational process of transmitting the shared cultural cognition is interrupted and blurred by the adopted conceptualizations from the host culture (Figure 11). A question that can be raised here is how these low frequency metaphors have made their way into the cultural cognition of NA-E bilinguals.

This shows that language and identity are two separate components of culture and that identity has a mutable, inconstant nature; therefore, NA-E bilinguals opt for L2 identity that is represented by the macrolinguistic components that facilitate the process of getting unequivocal communicative messages across to the listener. Encouraged by the open and inclusive atmosphere in their host community, Neo-Aramaic bilinguals opt for preserving their cultural identity outside the linguistic realm of their ancestors (Edwards, 1984, 1985; Myhill, 2003). This prediction contradicts Fishman's (1991) opinion that language and cultural identity are crucially linked. Language, for NA-E, does not constitute an essential part of their identity; therefore, they choose not to use it in their everyday interactions. Other factors, such as tradition, religion, and endogamy constitute the

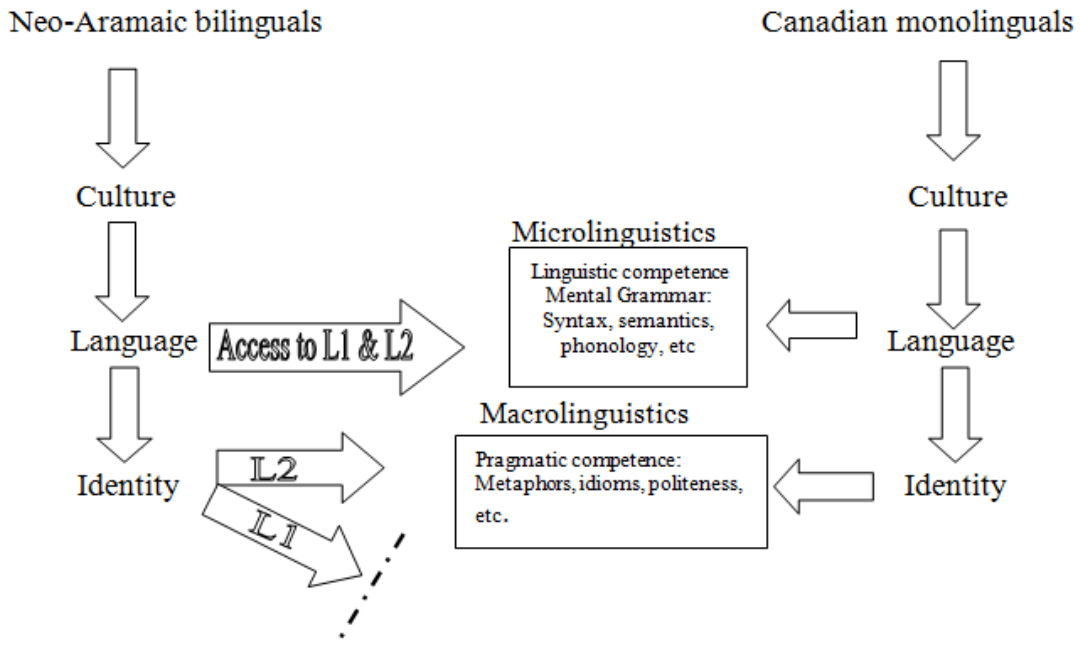

Figure 11. NA-E bilinguals and CE monolinguals linguistics and pragmatic competence.

vitality of their identity.

CONFLICT OF INTERESTS

The author has not declared any conflict of interests.

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Appendix 1

Distinct and identical metaphors

What does this animal (for example, wolf) refer to? This animal name may refer to human body-part, behaviour, or characteristic. You need to provide an appropriate adjective or description that best describes its meaning. In case you provide more than one adjective, you should be consistent; do not provide conflicting or incompatible adjectives. Use the first adjective or description that comes to your mind.

What human characteristics does this animal refer to? If you do not know type an X.

1- Person X is a WOLF	●Male ●Female ●Both	●Always ● Usually ●Sometimes ●Rarely ●Never ●None
2- Person X is a DONKEY	●Male ●Female ●Both	●Always ● Usually ●Sometimes ●Rarely ●Never ●None
3- Person X is a **CHICKEN**	●Male ●Female ●Both	●Always ● Usually ●Sometimes ●Rarely ●Never ●None
4- Person X is an **OWL**	●Male ●Female ●Both	●Always ● Usually ●Sometimes ●Rarely ●Never ●None
5- Person X is a MOUSE	●Male ●Female ●Both	●Always ● Usually ●Sometimes ●Rarely ●Never ●None
6- Person X is a COW	●Male ●Female ●Both	●Always ● Usually ●Sometimes ●Rarely ●Never ●None
7- Person X is a SCORPION	●Male ●Female ●Both	●Always ● Usually ●Sometimes ●Rarely ●Never ●None
8- Person X is a HORSE	●Male ●Female ●Both	●Always ● Usually ●Sometimes ●Rarely ●Never ●None
9- Person X is a MONKEY	●Male ●Female ●Both	●Always ● Usually ●Sometimes ●Rarely ●Never ●None
10- Person X is a FOX	●Male ●Female ●Both	●Always ● Usually ●Sometimes ●Rarely ●Never ●None
11- Person X is a DOG	●Male ●Female ●Both	●Always ● Usually ●Sometimes ●Rarely ●Never ●None
12- Person X is a **BEAR**	●Male ●Female ●Both	●Always ● Usually ●Sometimes ●Rarely ●Never ●None
13- Person X is a **LAMB**	●Male ●Female ●Both	●Always ● Usually ●Sometimes ●Rarely ●Never ●None
14- Person X is a tomcat	●Male ●Female ●Both	●Always ● Usually ●Sometimes ●Rarely ●Never ●None
15- Person X is a **RABBIT**	●Male ●Female ●Both	●Always ● Usually ●Sometimes ●Rarely ●Never ●None
16- Person X is a **LOUSE**	●Male ●Female ●Both	●Always ● Usually ●Sometimes ●Rarely ●Never ●None
17- Person X is a LION	●Male ●Female ●Both	●Always ● Usually ●Sometimes ●Rarely ●Never ●None
18- Person X is a SNAKE	●Male ●Female ●Both	●Always ● Usually ●Sometimes ●Rarely ●Never ●None

Appendix 1. Cont'd

19- Person X is a **GORILLA**	●Male ●Female ●Both	●Always ● Usually ●Sometimes ●Rarely ●Never ●None
20- Person X is a **CAT**	●Male ●Female ●Both	●Always ● Usually ●Sometimes ●Rarely ●Never ●None
21- Person X is a **PIG**	●Male ●Female ●Both	●Always ● Usually ●Sometimes ●Rarely ●Never ●None
22- Person X is a **FISH**	●Male ●Female ●Both	●Always ● Usually ●Sometimes ●Rarely ●Never ●None
23- Person X is a **MULE**	●Male ●Female ●Both	●Always ● Usually ●Sometimes ●Rarely ●Never ●None
24- Person X is a BITCH	●Male ●Female ●Both	●Always ● Usually ●Sometimes ●Rarely ●Never ●None

Appendix 2

Preamble statement

This survey is administered by (Ala Al-kajela of McMaster University/ Department of Linguistics and Languages). The purpose of the survey is to investigate animal metaphors in English and Neo-Aramaic. Information gathered during this survey will be written up as part of a dissertation. What we learn from this survey will help us understand the effect of learning a second language on the first language, how much native Neo-Aramaic speakers know about animal metaphors, and to what degree the non-native speakers achieve cultural integration. To learn more about the survey and the researcher's study, particularly in terms of any risks or harms associated with the survey, how confidentiality and anonymity will be handled, withdrawal procedures, incentives that are promised, how to obtain information about the survey's results, how to find helpful resources should the survey make you uncomfortable or upset etc., please read the accompanying letter of information. This survey should take approximately [30-45] minutes to complete. People filling out this survey must be [native monolingual speakers of English or Neo-Aramaic bilinguals and 18 years of age or older]. This survey is part of a study that has been reviewed and cleared by the McMaster Research Ethics Board (MREB). The MREB protocol number associated with this survey is [2015-068]. You are free to complete this survey or not. If you have any concerns or questions about your rights as a participant or about the way the study is being conducted, please contact: McMaster Research Ethics Secretariat Telephone 1-(905) 525-9140 ext. 23142 C/o Research Office for Administration, Development and Support (ROADS) E-mail: ethicsoffice@mcmaster.ca

Appendix 3

Consent
I have read the information presented in the information letter about a study being conducted by Ala Al-Kajela of McMaster University. I have had the opportunity to ask questions about my involvement in this study and to receive additional details I requested. I understand that if I agree to participate in this study, I may withdraw from the study at any time. I agree to participate in the study
Having read the above, I understand that by clicking the "Yes" button below, I agree to take part in this study under the terms and conditions outlined in the accompanied letter of information