Easier Said Than Done:
Metaphor Interpretation between English and American Sign Language

Benjamin Anible
University of New Mexico

ABSTRACT. A pilot study performed on interpreted discourse of the 2008 presidential primaries found that when English-to-ASL interpreters encounter idioms on different ends of the continuums of CONVENTIONALITY and COMPOSITIONALITY, the type of interpretation they give is predictable. Shared metaphors received a higher proportion of transcoding interpretations than metaphors that were not shared. Additionally, opaque and fixed metaphors received more conceptual translations then other type of idioms. These results paint a picture of the unique challenge that encountering metaphors can pose while engaged in simultaneous interpretation and shed light on the nature of ASL metaphors.

1. INTRODUCTION. Expressing the intricacies of human thought is beyond the capabilities of literal language alone. Abstract concepts, scientific theories, the vagaries of emotion, and even many mundane daily activities are best conveyed through the use of metaphor. Steven Colbert once jokingly asked Elizabeth Alexander, the author of the poem 'Praise Song for the Day' (read at the inauguration of President Barack Obama), 'what's the difference between a metaphor and a lie?' to which she replied 'the two are not necessarily exclusive, metaphor ... is how you use the language to *increase* meaning' (Colbert 2009). Metaphor is often (and occasionally humorously) misconstrued as a special exception to normal language use.

There are many motivations for the use of metaphor in discourse. This paper discusses the psychological structures that make metaphor possible, reviews how metaphor has traditionally been viewed, explores specific metaphorical mechanisms in spoken and signed discourse, and considers how metaphor can affect bimodal interpretation (interpretation between a signed and spoken language).

2. CONCEPTUAL METAPHOR. The example from the Colbert interview above shows that metaphor might be considered a special case of language use. However, some linguists (e.g. Lakoff & Johnson 1980, Fauconnier & Turner 2002) have come to believe its influence is deeply rooted in our physical experience. This idea is commonly referred to as CONCEPTUAL METAPHOR THEORY. At the core of this theory is the idea that the way we think is inherently metaphorical, because we generalize from our interaction with the world to a higher order of abstraction. A conceptual metaphor is a quick and dirty way we interact with things in the world that are beyond concrete experiential perception. A good example of this is *anger*. Anger is not something we can see or taste or hear or touch. When we talk about anger, we use a metaphor; a relationship in our mind between a concrete thing and an abstract thing. See 1 below.

(1) Bill really blew his stack today in class.

The phase 'blew his stack' is an expression of a conceptual metaphor along the lines of Anger Is A Heated Fluid In A Container. Here, a 'stack' is conceptualized as something that can

undergo a violent change in state ('blowing') due to the heating of a fluid. The expression likely comes from the flap on steamboat smoke stacks.

Lakoff and Johnson's (1980) theory of conceptual metaphor convinced many linguists about the primacy of metaphor in thought and language. In the 2003 afterword to *Metaphors We Live By*, four fallacies that have proved to be stumbling blocks for the acceptance of conceptual metaphor theory are outlined: metaphor is merely a matter of words, metaphor is based on similarity, concepts are literal and cannot be metaphorical, and rational thought is not shaped by the nature of our physical bodies. Lakoff and Johnson argue that, in fact, metaphor is concept-based, not word-based. Metaphor is not based on similarity, but on cross-domain correlation. Even basic concepts are reasoned about via multiple metaphors; the concept of time is often mapped on to our understanding of spatial relations. Metaphor is inherent in the way our bodies interact with the world daily.

Lakoff and Johnson also explain that there is a neural basis for metaphorical thought. Primary metaphors (those that more complex metaphors build on) arise via CONFLATION Our earliest experiences of affection, or being held, create warmth, which gives the metaphor Warmth Is Affection. Neural activation occurs in the regions associated with temperature and those associated with emotion. As 'neurons that fire together wire together', this physical construction of two sets of neurons *is* the structure of the metaphor itself (Lakoff & Johnson 1980).

Traditionally, a metaphor is defined as the 'transfer of relations from the semantic field of the vehicle to the conceptual domain of the topic' (Wilcox 2000:8), where a vehicle is the focal point in a metaphor (also indicating the aspect of 'transport') and the topic is the subject of the transfer. In constructing metaphorical meaning, the vehicle has a privileged position. The comparison between the two domains is asymmetrical. Anecdotally people always talk about how all metaphors break down at some point, which appears to take effect when a bidirectional comparison is made.

Metaphor has also traditionally been considered one type of TROPE, or figure of speech. Important tropes for understanding metaphor in signed languages are simile, metonymy, synecdoche, and experiential metaphor. Synecdoche has been called a master trope in which aspects of both metaphor and metonymy take effect. Metonymy is a where a part of a domain stands for the whole. Since metaphor is when one domain stands for another, a synecdoche is when part of one domain stands for part of another. The difference between simile and metaphor is the subject of extensive debate but can be schematically thought of as a qualitative rather than a quantitative distinction (Wilcox 2000). Finally experiential metaphors are those that are deeply ingrained into our everyday language use and include ORIENTATIONAL, ONTOLOGICAL and STRUCTURAL distinctions. Wilcox also notes that metaphorical extensions are a critical component of language change and that it is a device for adapting language to culturally specific communicative needs.

In spoken discourse, it has been recognized that metaphor can be used for a broad range of communicative intentions. Cacciari (1998) proposes five main reasons speakers elect to employ metaphorical expression. The first is to bridge the gap between abstract mental conceptualizations and perceptual experiences. A good example is the use of color terms. Using the word *white* to mean honest or clean rather than the word *purple* is not just an artifact of the language. Rather, the properties of white things in our perceptual experience (such as a field of snow) carry a quality of the mental realities we use *white* to explain.

The second reason for using metaphor is to express emotional experience. Mac Cormac

(1985) elaborates on this idea, suggesting there is an emotive imperative in metaphor that creates a bond between interlocutors: 'The illocutionary force of sharing may constrain the variety of perlocutions that occur' (161). What he means is that the performative act of uttering a metaphor affects a particular reaction in a listener that a purely literal utterance of an equivalent idea would not necessitate.

Another reason Cacciari outlines, is to set or change the conceptual perspective of the speaker and their audience. Metaphor evokes cultural models. Metaphors can also force us to see a situation or idea from a different perspective than we originally had been viewing it in. Also, metaphors are used for politeness and saving face. Figurative language can be ignored or misunderstood—segmenting an audience into those who get it and those who don't. Finally, metaphor is used to summarize bundles of proprieties. Metaphors' interpretations depend on the fact that they provide a compact form of expression for complex ideas. 'A literal paraphrase of a metaphor inevitably says too much—and with the wrong emphasis' (143). Cacciari finally ruminates that metaphors are epistemologically and communicatively necessary. Metaphor is an iconic tool of language just as the hammer is the iconic tool of the arm and the telescope the iconic tool of the eye.

The discourse use of metaphor in spoken language proposes few constraints (though clearly there are *patterns*) on the specific phonological and lexical forms that metaphor can take for particular communicative intent. Turning now to the way that signers employ metaphor, we will find that there are unique restrictions that spring from the visual modality, namely ICONICITY.

3. ICONICITY. American Sign Language (ASL) linguistics has had a rocky relationship with the topic of iconicity. Because iconicity and metaphor are so intertwined with each other, an understanding of the evolving perspective on iconicity is important to explore. Briefly, arbitrariness was famously proposed to be a prerequisite to recursivity (Saussure 1916), and by extension to be a prerequisite to human language (Hockett 1960). Early sign linguists needed to obscure the role of non-arbitrary signals to cement the legitimacy of signed languages. Interestingly, iconicity in the aural modality has also been recognized. At the discourse level, events in a narrative are generally recited in chronological order (Haiman 1980). At the sentence level, constituents that are more relevant to a given verb are syntactically close to it (Bybee 1985). At the morpho-phonemic level, phonesethemes like *glisten, gleam*, *glitter* have restricted but regular form-meaning (gl=bright) correlations. At the phonemic level some sound patterns in English are statistically associated with concreteness and imageability (Reilly & Kean 2007).

A number of sign language researchers, however, have recognized the centrality of iconicity to signed languages. Many, unfortunately, mistook iconic relationships as metaphoric. All the errors stem from recognition of a mapping, but failing to disambiguate form-meaning connections from form-meaning mappings with an additional meaning-meaning facet. Mandel (1977) recognized metonymic mappings like the profiling of 'beard' in OLD, but misidentified the purely iconic mappings of the 'branches' in TREE as metaphoric. Boyes-Braem (1981) showed ASL is iconic while still allowing recursivity by virtue of its regularity. Gee and Kegel (1982) discuss how the concrete experience of locative manipulation is iconically productive in ASL in such a way as to allow the infinitely recursive expansion of location components to novel lexical items. Wilbur (1987) is a notable, but cursory, exception in that she recognized the *double* mapping for a sign like BRILLIANT where SEEING IS UNDERSTANDING is interleaved with the concept of shining and in turn, iconically mapped to the 8 handshape and a sparkle-like

motion. Brennan (1990), analyzing BSL, makes the same error as Boyes-Braem in calling iconic signs metaphorical.

Taub (2001) proposes a model for the creation of iconic forms in both signed and spoken language which she calls the ANALOGUE BUILDING model. The model consists of three stages: image selection, schematization and encoding. In the first stage, an image is selected from the store of concepts for a particular individual. This is an inherently metonymic process since the total meaning of all attributes for a particular concept is always more than can be represented by a particular symbol and some parts must be focused. In the second stage, the selected properties are abstracted and generalized such that only the properties that are important for a specific language are retained. In the final stage of the process the selected schema is encoded into actual linguistic form. Encoding is necessarily arbitrary, because any given language has a set of tools (for signed languages a set of morphophonemic parameters) that are conventionalized in their use.

Metaphors are incorporated into the model by target-source correspondences made before image selection. Additionally, metaphorical signs are pre-schematized, meaning the relevant concepts have already been selected by the metaphor mapping process. For the encoding stage, there are no differences between iconic and metaphorical-iconic signs.

Meir (2010) continues the examination of the interaction between iconicity and metaphor in sign languages looking at Israeli Sign Language (ISL). Following Taub, she defines iconicity as a set of selected correspondences between the form and meaning of a sign. This allows for some signs to be fully iconic or partially iconic, given the number of correspondences between all the possible parameters of form and meaning that exist for the sign in question. Meir notes, however, that there is a constraint on the possible metaphorical mappings of iconic forms. She calls this the 'Double-Mapping Constraint (DMC): A metaphorical mapping of an iconic form should preserve the structural correspondences of the iconic mapping. Double mapping should be structure-preserving' (879).

An example of this is the ISL sign for FLY, which iconically maps arm flapping to wing flapping. This form resists metaphoric collocations like 'time flies' that exist in many spoken languages because the source 'wing flapping' does not meaningfully map to the target 'time'.

While ECHOICS in the spoken modality do not seem to be constricted by the DMC, idiomatic expressions do share similarities to the observable visual modality limitations. The contexts in which an idiom may be used have to be compatible with the mental image invoked by the literal meaning. For example, the idiom 'to be caught between a rock and a hard place', which roughly means 'to be in a very difficult position; to face a hard decision', can be used only in contexts in which a protagonist is being trapped between two very difficult obstacles, and not in any situation where the protagonist faces a hard decision (ibid).

The iconic blocking of free mapping in signed language metaphor might also account for the interesting fact that one of the more common ways spoken languages express a conceptual metaphor—the idiom—is very infrequently observed. Before unpacking this idea, first consider the role of idiomatic expressions for conveying conceptual metaphor in spoken language.

Gibbs et al. (1997) set out to answer the question: 'Do people quickly access conceptual metaphors each time an idiom is encountered in discourse?' The presupposition behind this question is that metaphor is more than a linguistic artifact, but rather a significant aspect of cognition. Four different hypotheses are offered as possible answers to the question.

H1: Metaphoric impact can be traced diachronically in expressions.
H2: Metaphor as understood in a community motivates interpretation of expressions.
H3: Metaphor as understood by an individual motivates interpretation of expressions.
H4: Metaphor is an online processing phenomenon.

To test these hypotheses, the author ran two experiments. The first was aimed to test whether metaphorical knowledge is accessed in online processing. This was done in a lexical decision–priming paradigm where the comprehension time of a conceptually related word to a previously displayed metaphor phrase was measured. Expression 2a was presented, after which subjects reported whether either a conceptually related word, 2b, or conceptually not related word, 2c, was a lexical item in English.

(2) a. cross that bridge later
     b. water
     c. waste
     d. fix that problem later

Results indicated that lexical decision times were in fact lower in the test scenario 2b, indicating positive evidence for hypothesis H4. The average RT for a related word was 899 ms (s.d. .05), but 914 ms (s.d. .03) for an unrelated one. An alternative interpretation of these results is that the core concept in the metaphor and the literal interpretation of the idiom were in alignment somehow. A control test used literal paraphrases, 2d, against idioms and still found response times in a conceptually related lexical decision task faster after reading the idiom than the literal paraphrase. The faster RT for related items suggests activation of specific conceptual knowledge.

Gibbs et al.'s experiment presents convincing evidence that idioms like those in 1 and 2a activate underlying conceptual metaphors like Anger Is A Heated Fluid In A Container or Problems Are Bodies Of Water. If a process like this exists in spoken languages like English is there an equivalent structure in a signed language like ASL? There are some examples of collocations that express a conceptual metaphor in ASL such as 3 and 4, but they are much less common than they are in English. In 3, the meaning 'you're too late' is an expression of a metaphor along the lines of Conversations Are Entities. In 4, the meaning 'I've already been there' is an expression of Physical Contact Is Being In A Location, where the touching of the hand is the physical contact. It may be that even for these examples, the only cross-domain mapping occurs with the signs TRAIN and TOUCH respectively and the other materials in the collocations do not contribute to the meaning of the core lexical items of the metaphor itself.

(3) TRAIN GO SORRY
(4) TOUCH FINISH

Why then, are there so few examples of ASL metaphorical collocations (idioms)? One possible explanation, as mentioned above, is that restriction of the double mapping constraint doesn't allow for additional signs to contribute to the meaning of the metaphor as a whole. Many signs bring their own iconic construal (following Taub's model) of conceptual content that interferes with the very specific construal the conceptual mapping selects. In this way there simply is no need for a collocation. Single metaphorical signs are able to perform the same

functions, using the same cognitive processes that idiomatic expressions do in English. Another possible explanation is that ASL and other signed languages around the world are not old enough to have the sort of idiomatic artifacts that are so readily apparent in English. Indeed, linguists have recognized that there is a tendency in ASL for iconic forms to become less iconic (Frishberg, 1975). It is conceivable that as forms become less and less iconic, more metaphorical collocations may arise.

4. PILOT STUDY. Having recognized that there are two unique ways the forms of English and ASL metaphorical expressions are realized (single vs. multi-word instantiations), it is potentially enlightening to consider how interpreters working between these two languages navigate the difference. Do restrictions on form-meaning mappings in English affect how idioms are interpreted into ASL, where such mappings interact with purely metaphorical ones?

First, it is useful to categorize English idioms as a function of diachronic semantic shift that varies on two continuums as first elaborated by Fillmore, Kay, and O'Connor (1988). These continuums are perhaps most easily thought of as CONVENTIONALITY and COMPOSITIONALITY. On one end of the conventionality scale there are extremely productive forms like the form 'the X-er the Y-er', where any number of lexical items can be substituted for X and Y, as in 5a and 5b. On the other end, there are extremely fixed forms that cannot have any of their constituents substituted without losing their meaning like 'give it up'— meaning applause. The other continuum of compositionality has very transparent idioms on one end like 'wide awake', where the meaning of each word contributes nearly fully to the meaning of the phrase as a whole. Opaque idioms, by comparison, are not immediately understandable from the literal meaning of the words that substantiate them (consider 'a snake in the grass'). See Figure 1 for an illustration of how example metaphors fall out along the two continuums.

(5) a. the bigger the better
b. the smaller the brain the smarter you are

A pilot study performed on interpreted discourse of the 2008 presidential primaries found that when English-to-ASL interpreters encounter idioms on different ends of these continuums, the type of interpretation they give is predictable. Triandis (1976), following in the footsteps of a long tradition of literary translation, identifies that interpretations themselves vary on a formal/dynamic continuum of equivalence. Formal equivalence focuses attention on the message whereas dynamic equivalence focuses attention on the intended audience.

Using this distinction as a starting point, three types of interpretation were selected that incorporate the stages of metaphor construction in sign language while simultaneously incorporating the distinction between formal and dynamic equivalence. Twenty-five tokens were obtained from YouTube over a series of four video-clips by random selection. The selection of tokens from a specific register and genre was carried out in an attempt to factor out as much variation as possible given the small sample size. All coding of English idiom type and translation type were performed by the author.
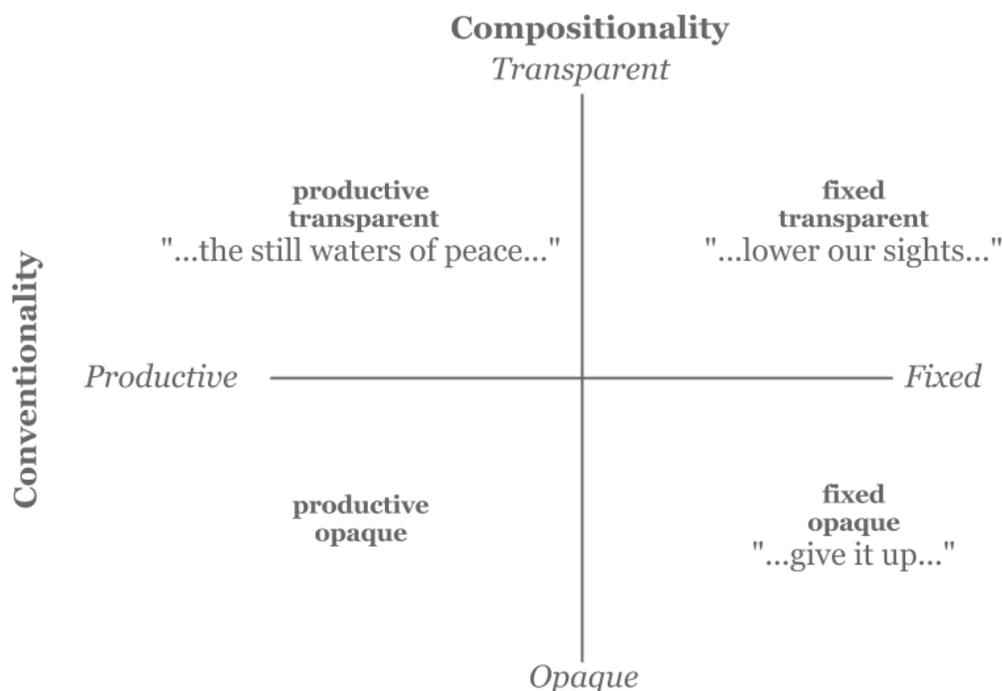
Compositionality

Transparent

productive transparent
"...the still waters of peace..."

fixed transparent
"...lower our sights..."

Productive —————————————————————— *Fixed*

productive opaque

fixed opaque
"...give it up..."

Opaque

(vertical axis label, left side) **Conventionality**

FIGURE 1. Types of metaphors on the scales of compositionality and conventionality.

The first type of interpretation—TRANSCODING, as in 6, neither renders equivalence of the metaphor's image selection, nor does it give equivalence in the encoding. In other words, while in English *met* in this context conveys the concept of confrontation, in ASL the sign MEET does not carry this connotation and the iconic mapping of the sign does not include this connotation either. It is attempting to convey formal equivalence but fails. The second type of interpretation—CONCEPTUAL, as in 7, conveys the dynamic equivalence in the image selection but fails to give formal equivalence in encoding. The third type—DEPICTIVE, as in 8, conveys both formal and dynamic equivalence at all stages of the metaphor creation process of the analogical building model.

(6) These challenges will be **met**. → CHALLENGE **MEET** WILL.
(7) These are the **voices** of Americans. → PRO.3 **VOICE** AMERICA
(8) I am not running for president to put a **band-aid on our problems**. →
    PRO.1 NOT RUN FOR PRESIDENT **CL:'put on band-aid'** PRO.2-poss PROBLEM

A possible predicting factor in the study was whether or not both English and ASL have metaphors that select the same image from the set of possible concepts that can be used to describe a given event. 9a is an example of a metaphor that is shared between ASL and English and 9b is an example of one that is not. 9b must be interpreted literally.

(9) a. he blew his stack → BOIL-WITH-ANGER
    b. cross that bridge when we come to it → THAT PROBLEM RESOLVE LATER

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A Fisher's Exact test showed no significant effect of sharedness on the type of interpretation (p = .31), though there was a trend for more depictive interpretations for the non-shared category than other categories. Conceptual interpretations were the least likely if the metaphor was not shared. No significant effect of conventionality on the type of interpretation (p = 0.11) was found. Fixed conventionality resulted in a high chance of conceptual interpretation. There was a significant effect of compositionality on the type of interpretation (p < .05). Opaque compositionality resulted in a significantly higher chance of a conceptual interpretation. See Figure 2 for results.

Compositionality

Transparent

n = 5	Trans	Con	Dep
shared	1	0	0
not	2	0	2

n = 3	Trans	Con	Dep
shared	0	0	1
not	1	0	1

Productive — — *Fixed*

Conventionality

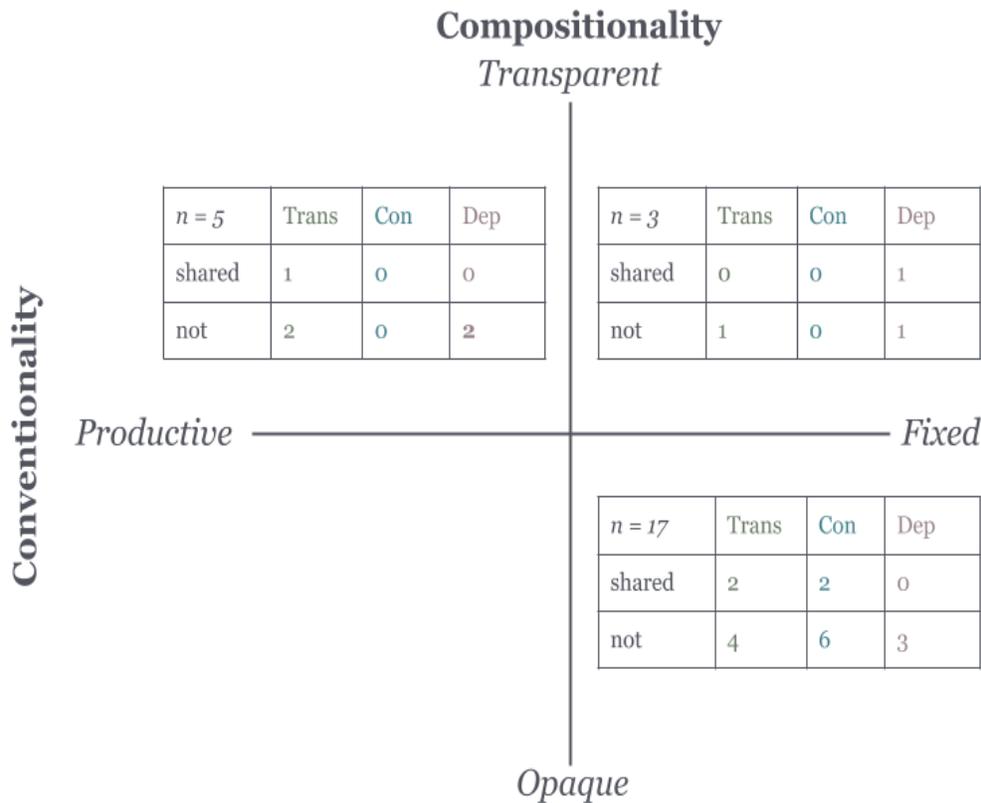| n = 17	Trans	Con	Dep
shared	2	2	0
not	4	6	3

Opaque

FIGURE 2. Types of interpretation categorized by type of metaphor.

While not significant in this sample, shared metaphors received a higher proportion of transcoding interpretations than metaphors that were not shared. Since depicting and conceptual interpretations more directly necessitate activation of semantic information, these types were used when metaphors were not shared. Additionally, opaque and fixed metaphors received more conceptual translations than other types of idioms. Together these results paint a picture of the unique challenge that encountering metaphors can pose while engaged in simultaneous interpretation between signed and spoken languages. The role the iconic component of signed language metaphor creation adds should not be discounted when considering this challenge.

5. CONCLUSION. This paper has explored how a conceptually motivated understanding of metaphor allows for the widespread and daily use of metaphor in both thought and language. It

should not be surprising that signed languages also have the potential for rich and pervasive metaphor use. Linguists now recognize that a theory of signed language metaphor needs to account for iconic mappings.

The results of the pilot study described in this paper provide quantitative data to support this understanding of metaphor in ASL. There is no reason for depictive translations, which are most similar to well-formed visual modality metaphors in the theory proposed, to be preferred when the English text is using the least transparently metaphorical metaphors (fixed and opaque) unless source domains are conflicting with iconic motivations. In this case there is a smaller risk of the kind of iconic blocking proposed by Meir (2010). Put another way, when an interpreter is aware of the source domain of an English metaphor they are constrained in the number of form–source mappings they can employ in their ASL translation since some or all of those mappings would result in a nonsensical metaphorical extension. Comparatively, when an interpreter is unaware of an English metaphor's source domain motivation, they have more freedom to render an ASL interpretation with double mappings. Such interpretations are certainly preferable as they allow for functional equivalence in addition to conceptual equivalence.

It is reasonable to assume that the interpreters in this study were, indeed, aiming to achieve functional equivalence when possible. This is because when metaphors were shared between English and ASL transcoding interpretations we preferred. These transfer the English source–target domain mappings that are so important directly into ASL. While consumers of this kind of interpretation need to access their own knowledge of English metaphors to achieve comprehension, the import of the source text selection of a metaphor is still conveyed.

Future studies that can accommodate more rigorous controls on interpreter proficiency and metaphor selection are anticipated to more clearly reveal the trends observed here.

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