A cognitive key: Metonymic and metaphorical mappings in ASL

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Abstract

Research on metonyms and metaphors in ASL, especially in the area of frozen lexicon or creative prose, is contributing to an understanding of how our abstract cognitive reasoning is correlated through the physical ground of common experience. This article extends that research by examining the spontaneous dialogue of a native signer of ASL who responded informally during a semi-ethnographically structured interview. The emergence and recession of running conceptual integrations that underlie his narrative provides coherence throughout the discourse. His struggle for recognition of intellectual equality offers the field of linguistics insight into the areas of discourse analysis and human cognition.

Keywords: ASL; blends; discourse; metaphor; metonymy.

1. Introduction[1]

A deaf man pulls out an ordinary key from his slacks pocket, places it at the front of his forehead, and gives the key a twist. The simple, physical act reveals a rich cognitive structure of metaphors and metonyms in American Sign Language (ASL). This article examines the cognitive integration of idiosyncratic and conventional metonyms and metaphors elicited from the dialogue of a native signer of ASL during a semi-ethnographically structured interview with the author.

Ponterotto (2000) argues that if metaphor holds a central place in the interpretation and expression of human experience, then it also must serve as a cohesive force in discourse. Armstrong (2002: 450) believes that "[l]anguage grows out of the human body interacting with its physical and social environments—metaphorical structures are the pathways from gesture to meaning". In the analysis presented here, the linguistic gestures

of the informant reveal conventionalized cognitive structures of a meta-phorical and metonymical nature. The deaf person's impassioned plea that his intelligence be recognized offers evidence of embodied cognitive thinking in a visual gestural language. Metaphors and metonyms inter-act with, are embedded within, and heavily motivate and influence each other. Their use in ASL exhibits linguistic creativity that extends the lan-guage in powerful and expressive ways.

ASL is rich with intertwining metaphors and metonyms (Wilcox 2000; Taub 2001). These two cognitive processes help us to understand one another by (1) conceiving of one concept in terms of another (metaphor), and (2) using one conceptual entity to provide mental access to an asso-ciated concept (metonymy).

The anger metaphor in ASL, analyzed first by Grushin (1998), can be applied to the way that many deaf people feel about their education. Often deaf people feel a deep sense of bitterness and despondency con-nected with their education. The values that hearing people hold, espe-cially regarding speech, are not shared by all deaf and hard of hearing people (Padden and Humphries 1988). Although educational practices are improving with the advent of bilingual-bicultural educational philos-ophies, many adult deaf people look back at wasted years spent strug-gling to learn how to speak instead of focusing on intellectual growth. Even today, anger is often expressed by young deaf professionals who are trying to change the educational structure for all deaf people:

The fuse for those with hearing loss is often delayed ... and when it lights later in life, because of the shorter wick and the more combustible material that has sat there and dried, it tends to go off faster and with more power. Those of us who had to wait until the laws were passed ''allowing'' us to get an education in the U.S. are more easily ignited. The choices we make after being made to wait so long to ''get'' a true education, one that we could see rather than hear, added to the often resentment of the treatment of past educators (whether teachers or pro-fessors) and is like adding lighter fluid to an already large campfire. (Sadler 2003)[2]

This article looks at one deaf man's experience and reveals linguis-tic creativity that was repeatedly overlooked by his teachers in the school system that educated him. He describes the frustration he still encounters due to his childhood educational experiences. Despite his educational struggles, he asserts that he is a ''thinking human''. His simple discourse reveals the ingenuity of the human mind found in even the least educated among us. The comments that he presents about the functioning of his own mind and how it relates to components of modern technology are analyzed through the use of cognitive mappings and blends.

2. Background

Lakoff and Johnson (1980, 1999) claim that we often conceptualize the nonphysical in terms of the physical. We try to understand abstract ideas by using the knowledge we have about common objects in our world. For example, the metaphorical mappings that operate in THE MIND IS A CONTAINER and IDEAS ARE OBJECTS permit us to conceive of our brains as containers filled with mental items. We know that we cannot literally move ideas and thoughts, but we visualize ideas as objects. We know that objects in our everyday world can be manipulated. Even though ideas cannot be held, we conceptualize ideas as objects that we can hold or move.

Another conceptual ability is metonymy. One simple way to understand metonymy in signed language is to visualize a person using ASL to describe a dog. A basic metonym is instantiated when a classifier handshape ([bent 5] handshape) placed at the temple is used to represent a mutt's flopped ear. This is a classic representation of the part–whole relationship of metonymy, or more specifically, synecdoche, considered by many to be a subtype of metonymy. Looking at the canine's signed ear shape, we can immediately visualize the entire dog in our minds.

Cognitive linguists have spent the past two decades strengthening the demarcation between metaphor and metonymy. Most agree that metonymy remains within the same experiential domain or conceptual structure. When a signer uses a classifier handshape for the noun DOG, the addressee evokes the conceptualization of a whole animal.[3] What the sign represents (the shape of an ear) and the conceived thing (a dog) are both within the conceptual domain of animals. On the other hand, a root metaphor has two domains, a source domain and a target domain. In the metaphor THE MIND IS A CONTAINER, the source domain can be an object—a skull, for example, while the target domain is the abstract mind. The skull and the mind are in different conceptual domains.

Recent research on metaphor and metonymy has looked at the ubiquitous nature of both. While the two mental operations can be considered distinct, many linguists are noting the interaction between metonymy and metaphor and are intrigued by the continuum that simultaneously separates and unifies them (Goossens et al. 1995b; Fauconnier and Turner 1999; Panther and Radden 1999; Dirven and Pörings 2002).

3. Background on the discourse: José's education

The deaf man discussed in this article—we will call him José—received his education during the 1960s and 1970s, a period of philosophical strife

within the educational system. A 70-year ban on the use of signed language in public and residential schools systems was reaching an end (Lane 1986; see also S. Wilcox, this issue). José was often not allowed to use signed language in the classroom. He was subjected to the humiliation of being forced to attempt to speak, even though he could not hear the language that his teachers encouraged him to use. If an English-speaking child were placed in a soundproof room and told to learn a foreign language, say Chinese, from a person standing outside by looking through a glass window, it would be difficult for the child to learn to speak. Compound the situation for a deaf child, who may not even know that a language is being spoken or have any experience in controlling the speech apparatus. José was expected to accomplish this enormous task, and he failed. As an adult, José looked back on his educational experiences and was extremely frustrated with his schooling. While his teachers usually were unable to use the signed language that he was fluent in, José alone was blamed for his poor academic performance.

In this interview, José explains that his mind is like a computer, and he uses this analogy to show that he has the mental capacity to work—to think. Twenty years after leaving high school he still fumes over the cultural oppression of his former teachers and the resulting lack of upward mobility in the workplace. Since José did not graduate from high school, he is considered by society to be a relatively uneducated man, yet he demonstrates strong pride in his own intellect.

3.1. *Synopsis of the discourse narrative*

José uses ASL to explain that his mind is like a computer that has vivid thoughts flowing out of the printer that he figuratively situates at the top of his head. He uses several fingers to peck at the keyboard situated on the front of his forehead. Firmly punching one index finger above his temple activates a printout of paper. He shows how a person can reach up and grasp the printout as the paper shoots out of his forehead. He looks at the paper and rips off a page to allow people, specifically teachers, to scrutinize his thoughts more carefully. José appears proud of the printout that represents his thoughts. He asks an unseen person (perhaps a teacher or a mental therapist) to his right if she wants more information about his innermost thoughts.

Without waiting for a response, he asserts that he and only he has the key to unlock the computer at his forehead, permitting access to the private thoughts hidden within. He uses several conventionalized signs for the concept of unlock: a hook, a sliding latch, a turnkey. Allowing access to his thoughts is something that José does not take lightly. At this point,

and with a fanfare, José literally stands up, reaches deep within his front jeans pocket, pulls out a real automobile key attached to a chain and holds it to his forehead, pretending to unlock the lid on his computer. He indicates that the contents in his head—documented and recorded on the written paper that flows from his forehead—validate that he is indeed a smart person. He points to his forehead with his index finger and insists that he can write, think, and communicate. Defiantly, he uses a formal system of signed language that was taught to him during his youth, known as a manually coded English sign system, to exclaim, ''I AM NOT M(entally) R(etarded)—RETARD!''

4.   Analysis of José's discourse

This article will not analyze each metonymic or metaphorical mapping in the discourse. Rather, a representative selection has been chosen in order to document the interplay between the two cognitive tropes discovered within the narrative. Meaning construction that includes conceptual integration and blending will also be illustrated.

4.1.   THE MIND IS A CONTAINER

The first sign to appear in this analysis combines mappings for a spatial metonym for computer and the ontological metaphor THE MIND IS A CONTAINER. José places two [C] handshapes at opposite sides of his head. The iconic cupping image represents the schematized top of a computer. Spatial metonymic patterns of PART FOR WHOLE and CONTAINER IS CONTENT are evoked by the iconic handshapes placed on his head. Partial mental mapping connects the handshapes with the top of an early model of a computer. By metonymic extension, José's cupped hands evoke the mental image of a computer.

   The container metaphor in ASL denotes an abstract entity. Wilbur (1987: 177) found that deaf consultants use the [C] handshape at the front of the forehead to demonstrate that the mind can be visualized as a container filled with experience and knowledge. Image schema patterns in the MIND IS A CONTAINER metaphor expand and constrain its semantic functions. These underlying mappings in ASL convey abstract connections within the interior that are similar to the mappings found by Lakoff (1987) and Turner (1991), i.e., container, source–path–goal, link, front–back, up–down, and center–periphery. Turner (1991: 69) considers the front–back differentiation to be a consequence of interactions that a typical human body will have with the world around it. Front–back differentiation contributes to the conceptualization of linguistic expressions

that reflect this fundamental aspect of interaction with the world (e.g., *It's at the back of my mind somewhere*). ASL also distinguishes the front from the back, creating rich semantic instantiations.

Deaf people systematically use the forehead to represent conscious thinking when using ASL, as exemplified by signs such as REMEMBER, MEMORIZE, UNDERSTAND, FORGET, THINK, BRILLIANT, IMAGINE, OPINION, WISE, SUSPICIOUS, OPEN-MIND, among many others (Wilcox 2000: 107). Signs of mental domain in ASL do not appear in just any locations. There are patterned reasons for signs to appear at different locations around the head. For example, most of these signs referring to conscious thought are not conventionally produced at the back side of the head. The back of the head is reserved for signs referring to unconscious thought. This placement either (1) metaphorically hides information from other speakers, (2) is inaccessible to the signer under normal thought processing, or (3) has stored knowledge, perhaps gained through years of experience (Wilcox 2000: 107).

Many signed languages share these patternings, but there are also language-specific metaphors. For example, in Catalán Sign Language (LSC), the pervasive metaphor IDEAS ARE LIQUID is revealed in signs for teaching and learning (Wilcox and Jarque 2000).

4.2.   *Verb TO-OPEN*

José's initial sign, TO-OPEN, is articulated in the image of a computer lid or cover, but MIND IS A CONTAINER is the underlying metaphor. Metonymic image schemas are often created in the handshapes of José's signs. The computer container schema is one of a "more universal type of schema" (Niemeier 2000: 208). Although Niemeier was primarily researching folk models of the heart container, she found that a higher level of generality of container metaphors can be found in different contexts as well. She says that "when it comes to specific conceptualizations, the metonymic basis is clearly designed, whereas the more general conceptualizations have to rely on the more basic concepts acting as some kind of go-betweens" (2000: 208–209). A general underlying metaphorical mapping of basic concepts (e.g., THE MIND IS A CONTAINER) is found in the more specific metonymical TO-OPEN (computer cover), shown in Figure 1.[4]

The verb TO-OPEN is critical to José's story. By signing this verb, he indicates that he is permitting public access to his private thoughts. A person like José, who has been subjected to decades of linguistic and cultural oppression, has learned to keep his emotions and thoughts to himself. Yet in this interview he is willing to expose the emotional thoughts
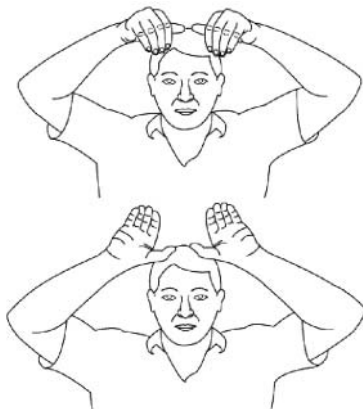
Figure 1.   *TO-OPEN COMPUTER*

churning inside. An explicit metonym is evoked when he physically and conceptually creates a computer image at his forehead. In the physical source domain, José demonstrates how to lift off the cover of a computer. In the abstract target domain, he is allowing access to his private thoughts. The metonymic computer image interacts with the more general conceptualized metaphor THE MIND IS A CONTAINER and produces ACCESS IS OPEN. This intimate mapping of metaphor and metonymy is also found in spoken languages (Goossens 1995a, 1995b; Barcelona 2000; Dirven and Pörings 2002).

4.3.   *KNOWLEDGE IS SEEING*

KNOWLEDGE IS SEEING is another general basic conceptualization that works through a portion of this discourse. The signs used for (1) opening the computer, (2) punching the printout key, (3) ejecting the paper outward, and (4) ripping off and displaying the printout in public space are each metonymic images that rely on the underlying conceptualization of KNOWLEDGE IS SEEING, even though José does not once sign either KNOWLEDGE or SEE.

We have already discussed the tropes found in the opening of the computer. A second metonym cohesively interacting with the basic metaphor MIND IS A CONTAINER is created when José uses his index finger to punch at his forehead. The forehead is an icon for the keyboard, which is in turn a metonym for the entire computer. The index finger metonymically represents all of the fingers of a hand that types on a keyboard.

Table 1.   *Partial mapping for PRINT-AT-FOREHEAD*

ICONIC MAPPING	METAPHORICAL MAPPING	
Articulator	Source	Target
Index finger punches at forehead Flat hand moves forward from head	Single peck on keyboard Piece of paper flows from printer	Initiates access to thoughts Public display of private thoughts

Metonymy expands from fingers on the keyboard to the working components of an electronic computer. In turn, a finger punching along the crease at the forehead metonymically and metaphorically represents specific thoughts being created by José's intellect. Although we cannot actually punch at our foreheads and produce ideas, we know that the physical motion of typing on a keyboard creates printed letters. This source domain of typing movements—printing words—at the forehead maps to the domain of creating ideas. The metaphoric and metonymic processes work together to evoke the concept that José is creating language on computer paper, and are summarized in Table 1.[5]

A third image is created as the printer paper flows from José's forehead. He uses a flat, thin handshape to iconically represent a flat, thin sheet of printer paper (see Figure 2). He rips the piece of paper from his forehead with both hands. This firm tug represents the complete, orderly collection of ideas that he has selected to share. José is ready to make his long-restrained thoughts available to the world. With a flourish, he brings the paper close to his eyes and scans the printout to ensure that his thoughts are mentally focused. His eyes quickly shift from left to right as he reviews the imaginary typed lines for accuracy. The printed words metonymically and metaphorically extend to the memories of past experiences that he has kept to himself for many years—encounters with teachers who shamed his attempts at speech and ridicule from co-workers for not being able to communicate.

One more image is connected to this metaphor KNOWLEDGE IS SEEING. The metaphor created when José rips the paper from the front of his forehead is motivated by a source domain that we are all familiar with—tearing serrated sheets of paper from a dot matrix printer. This physical domain maps onto the target domain of thoughts being detached from the repository of José's mind. His decision to share private thoughts has been made. José shoves the paper forward as though showing another person what is written on the sheet. Once again, the mapping of KNOWLEDGE IS SEEING metaphor underlies José's signs.

Figure 2. *PRINTOUT (paper ejects from forehead)*

4.4. *MY WORK*

When José signs the first-person possessive pronoun MY, he is making use of a reference point construction prevalent in our communications with one another (Langacker 1993; van Hoek 1997). Metonymy ensures that the addressee's attention is directed to the right conceptual target. By using our reference-point ability, we can help the addressee evoke a concept that might be abstract or harder to comprehend (Langacker 1993: 30). José does this with his use of first-person pronominalization, stressing the possessiveness of his mental ability, his ''work'' (the next sign in his narrative). Pronouns do not simply index references. They can be used to evoke subtle conceptions of the relationships between the referent and the context (van Hoek 1997: 36). A possessive construction can make use of a reference point to establish a mental contact with a target (Langacker 1995: 61). By virtue of the close metonymic connection and relationship between the possessive pronoun MY and the nominal WORK, the combination stands for possessiveness, private ownership, and control of the cognitive processing of his brain at work.

4.5. *Noun MACHINE*

The sign MACHINE represents the mechanical parts of a prototypical device that consists of moving parts. The two hands mesh together and slightly jiggle to represent the smooth running of a piece of machinery such as the transmission of a car or the gears of a grandfather clock.

MACHINE is typically signed directly in front of the signer's lower chest. Instead, José signs MACHINE near his forehead and thus metonymically and metaphorically highlights mental processing. Further, using the location of a previous sign is a type of anaphoric metonymy that creates narrative cohesion.

José uses the word MACHINE metaphorically to stand for the complex neurological components functioning in his brain. MACHINE is also a metonym, where the part (gears) represents the whole (the entire machine, including gears, wires, and exterior). When José signs MACHINE near his forehead, he creates a complex metaphorical-metonymic construction in which the donor domain of smooth-running machinery evokes intellectual activity.

4.6.   INSTRUMENT FOR ACTION

Throughout the discourse José talks about his wariness of sharing thoughts due to past abuses. Not understanding insensitive attempts made by others to probe his mind and feelings, José had turned inward. During the interview, he decides to "unlock" his emotions and thoughts. Not only does he use a conventional sign for KEY in a novel situation (Figure 3), but he stands up and grabs a real key from his pocket in

Figure 3.   *Example of one of several "unlock" variants*

order to emphasize the prominent role that the key, representing access and control, has in revealing his thoughts. CONTROL is a basic schema that functions on the level of human interaction with others (Pauwels and Vandenbergen 1995: 49–50). José wants to be in charge of this self-determining event.

Barcelona (2002: 267) notes that metonymies will normally lead to other metonymies and we can often ''read off a changing of several metonymies, all of them triggered off by the same linguistic expression''. In the case of the physical key being used metaphorically to unlock the contents of José's mind, the metonymy of INSTRUMENT FOR ACTION provides a two-way unleashing of submetonymies. The sign for KEY has a strong iconic correspondence between the handshape and one's physical grip of a real key. The first metonymic reading occurs as the real key tip plugs into José's forehead—his mind.

The key in José's hand metonymically activates a second complex submetonym at the opposing end of the blade of the key on its bow. José manipulates the bow with his hand, thus controlling the key. Lakoff and Johnson's (1999: 270) primary metaphor SELF CONTROL IS OBJECT CONTROL depicts self-control and object control as inseparable experiences. A common way to exert control over an object is to exert force on it, creating the complex metaphor SELF CONTROL IS THE FORCED MOVEMENT OF AN OBJECT (Lakoff and Johnson 1999: 271). Holding and manipulating a real key allows José to express his control over the decision to share his thoughts.

Clark and Clark (1979: 767) explored how people could readily understand denominal verb usage (noun-to-verb shifts) with phrases they had never before heard, such as *porch the newspaper* or *sheet the furniture*. Their reasoning was: ''the speaker means to denote the kind of state, event, or process that, he has good reason to believe, the listener can readily and uniquely compute on this occasion, on the basis of their shared knowledge''. Although Clark and Clark do not mention metonymy in their account, Kővecses (2002: 219–221) claims that their eight classes of denominal verbs are instances of metonymies via what he calls the ACTION idealized cognitive model (ICM). This ICM explains why such denominal verbs are readily made and understood by speakers of English. Kővecses further acknowledges the significance of metonymy in exchanges between language users. He believes that the ACTION ICM and the metonymic relationships that it defines are ''deeply entrenched in the conceptual system of speakers of English'' (2002: 220). When José uses the ASL sign KEY for the action (unlocking) involving that instrument, he instantiates the metonymy INSTRUMENT FOR THE ACTION INVOLVING THAT INSTRUMENT.

5.   Conceptual integration (blending)

The theory of blending or conceptual integration subsumes metonymy and metaphor as special cases of more general mental mapping mechanisms (Fauconnier 1997; Turner and Fauconnier 2002). Blending takes place when José so effortlessly conceives of his forehead as a computer, a printer, and a lockbox requiring a key, all in the same discourse.[6] In this section I will explore a partial conceptual integration analysis to illustrate the coherency and blending of concepts that takes place in José's narrative (Figure 4).

   In the generic space in Figure 4, underlying concepts of *container* and *means of access* are found. Both concepts are shared by all three input space domains and promote coherence among them. Coherence in a text provides concepts and relationships that underlie the surface text and are
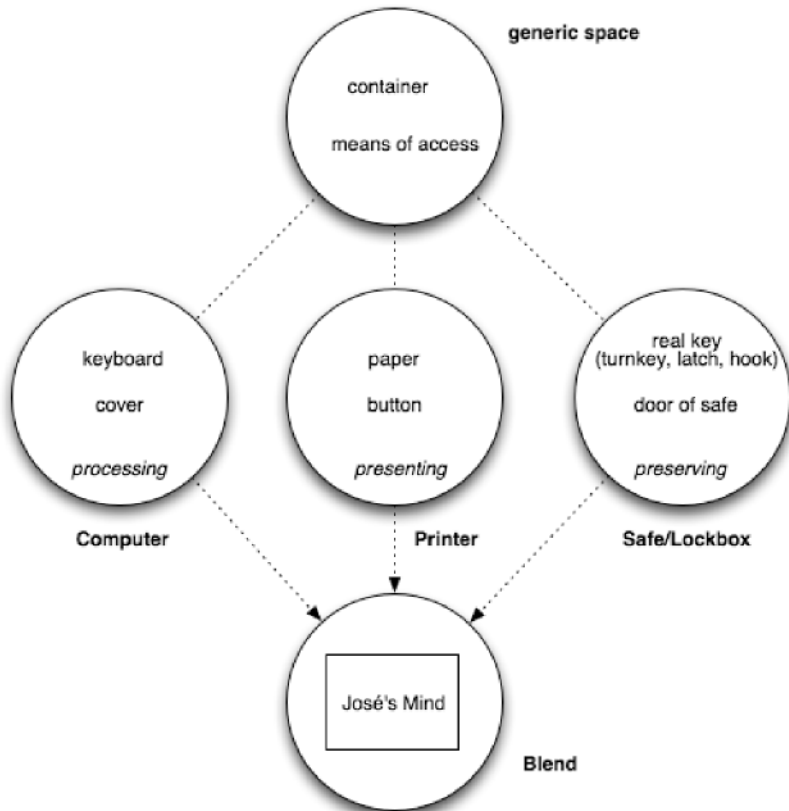

Figure 4.   *Conceptual integration of José's mind*

mutually accessible and relevant (de Beaugrande and Dressler 1981: 4). The underlying concept of *container* is activated consistently among the items that José creates at his forehead (computer, printer, lockbox). This shared counterpart found in each input space projects a composite structure of a box or a container that is holding something within. Even though the computer and the printer are electronic devices and the safe lacks electronic components, all three are containers with something inside.

A second concept that produces coherence is *means of access*. Each item requires a different strategy to open, release, or unlock it—the computer can be opened by having its cover removed; the printer requires one to push a button to eject the printer paper; the lockbox needs a key. In their own way, all three exploit the underlying *means of access* concept found in the shared generic space. This mutual coherence of both *container* and *means of access* provides interactive blending that takes place throughout the discourse.

The emergent blend, which is José's mind, consists of running conceptual integrations that change and emerge depending on what José is signing. Taken together, the inputs project conceptualizations that make new relationships possible in the blend structure representing José's mind. The two electronic devices provide conceptualizations of thoughts being created and processed (the computer) and thoughts being presented publicly (the printer). Knowledge about safes and locks evokes information about the preservation of something that is being hidden. Although not electronic, the lockbox coherently identifies with the two electronic items via the concept of *means of access* in the generic space.

Through its many keys, the lockbox also exploits images of different kinds of safes or compartments. The input space changes according to the type of key (represented by different classifier handshapes) that José uses—turnkey, sliding latch, hook. The number and variety of keys involved in this input override the concept of mere unlocking (although *means of access* is still in the generic space) and profile instead the idea of being hidden and closed. What emerges is the concept of preserving something valuable.

Throughout the discourse, José offers selective features of a computer, a printer, and a locked enclosure without offering a full image of any one, because the blend is always partially triggered by the preceding input while exploiting partial conceptualizations from an upcoming input.

5.1. *PROOF*

Simon-Vandenbergen (1995: 104) finds two major donor domains that provide metaphors for directness and indirectness. The first is movement

in space, in which speech is expressed in terms of movement along a straight path. In English, this is found in phrases such as *flat-out* versus *beat around the bush*. The *straight* metaphor is pervasive in spoken language use. Cienki (1998) describes the straight image scheme and considers it to be prevalent in our environment, in our manipulations of objects, and in our bodily forms and movements.

The second domain is covering and concealing, and can be understood through the metaphors of UNDERSTANDING IS SEEING and KNOWLEDGE IS SEEING. Simon-Vandenbergen compares *speak plainly* to *plaster over an issue* in order to demonstrate that the more one covers up the meaning, the greater the indirectness.

José chooses to bring his thoughts into the open when he signs PROOF. In ASL, José turns his palm upward and slaps the back of his right hand on his nondominant palm, which is producing the sign for a piece of paper (thin, flat object) directly in front of the addressee. The palm bounces with an upward jerk, metaphorically lifting the ''paper'' up from the palm into the sight line of the addressee. The paper is held facing upward to show what is written or printed on it, laying out evidence of José's intelligence.

In this sign for ''evidence'', two coherent metaphors are mapped simultaneously. The PROOF sign is an instantiation of the KNOWN IS DOWN metaphor found in both English and ASL (Lakoff and Johnson 1980: 20; Wilcox 2000: 121–123). The experiential basis of this metaphor is that an object is easier to grasp and hold in your hands for examination purposes if it is down near the ground rather than floating around in the air. Once again, even though José does not sign either KNOWLEDGE or SEE, the underlying mapping here is KNOWLEDGE IS SEEING.

Verticality enters our experience in many different ways and can give rise to contrasting but coherent metaphorical mappings (Lakoff and Johnson 1980: 19). Each has a different experiential basis. The slap *downward* on the palm represents a piece of evidence being slapped onto a table for verification purposes, and the jerk *upwards* represents an ''in your face'' quality of visibility. Together, the metaphors work to provide proof that José is competent.

5.2. *PAPER, EXPLAIN WHAT SAY*

The analysis here comes from a rapid response that José made when the author asked what he meant when he signed PAPER as he was explaining that he had proof of his intelligence. When José was asked to explain what was on the piece of paper that had just ejected from his forehead, he pointed to the sign PAPER and then to the conscious thinking area on his forehead. He signed:

PAPER, EXPLAIN WHAT SAY, INDEX (to conscious thinking area): CAN A–B–C … WRITE, DO, THINK, COMMUNICATE, WORK. INDEX (to paper), INDEX (to conscious thinking area) I AM NOT M(entally) R(etarded) R-E-T-A-R-D! 'The words on this paper show that my mind is capable of conscious thinking. Because I can write, there's proof that I'm capable of performing everyday functions, of communicating with other people, of working well. This paper represents my thoughts and is absolute proof that I am not mentally retarded!'

5.3.   *SAY*

The sign SAY is typically articulated directly in front of the mouth: tiny circular movements visually depict the flow of speech. SAY metonymically stands for the speech produced by the person. Speech can in turn be viewed as a metonym for the language spoken.[7] However, although José is familiar with this commonly used sign, he is not using the verb SAY to refer to speech at all.

The piece of paper which he explains "says" something is an example of *conceptual displacement*, our ability to describe a situation from a vantage point distinct from our actual one (Langacker 1985: 127). Langacker speculates that a third-person expression can be used to designate a ground element in order to impose an external perspective. Thus, a third-person pronoun form is consistent with the desire to treat "self" as "other" and is necessary as a means of making the perspective shift explicit. José's use of third-person displacement results in personification: "The paper (personified) says …".

The mapping that takes place in personification also permits the selection of different human aspects—motivations, characteristics, activities— to be imposed onto a nonhuman object, the paper.[8]

Next, a mental space construction occurs when José touches his forehead, the conscious thinking zone, with his index finger. Although the phonological form is identical to that used in the sign THINK (see analysis below), the action now serves as an anaphoric reference to the printout paper, which stands for the thoughts conceived in José's mind. A subtype of the metonym EVENT FOR PLACE is described as PLACE FOR ACTIVITY PERFORMED AT THAT PLACE (Radden and Kővecses 1999: 42). The forehead serves as a location for the totality of José's thoughts. Pointing toward his forehead brings those thoughts into focus. The printed lines on the piece of paper metaphorically and metonymically map to the total collection of thoughts created in José's mind. Thus, the written text on the printout paper metonymically extends to José's total knowledge, his ability to function and to work in society, his political and cultural mores and viewpoints, and his ability to think (see Croft 1993).

The paper metonymically and metaphorically says that José has the capacity to think.

5.4.   *Modal CAN*

ASL has an experiential, bodily basis that motivates the metaphorical and iconic principles described here (Wilcox 1996: 490). One example of this is the experiential grounding of modals. Sweetser proposes a force-dynamic analysis of modality in which a word such as *can* indicates a real-world force that is imposed on the speaker to do the action (Sweetser 1990: 64). Modals can also be considered as linguistic expressions of social reality (Gerhardt 1985, 1990). In José's next sentence, CAN represents a forceful statement from him indicating that he has the ability to think intelligently, previous life experiences notwithstanding. Using the modal CAN, he expresses a strong state of ability.

The signed modal CAN, with its single, unreduplicated movement, is historically related to the sign STRONG (Wilcox and Wilcox 1995). Long's 1918 description of CAN shows phonological similarity to the modern form of CAN:

Hold out the ''S'' hands to the front from the side; moving them slightly to one side, describe a small arc or circle, making a show of using considerable force. The motion is something like slinging a sledgehammer. Note: The sign for 'strong' is somewhat similar to that for 'can:' in the latter no circular motion is given the hands but they are brought straight down. (Long 1952 [1918]: 109–110)

This development corresponds to grammaticization paths for similar modals found in other languages (Fleischman 1982; Heine et al. 1991; Sweetser 1990), where semantic extension moves from the concrete to abstract senses, and the vocabulary of the physical world is used to talk about the mental world.

5.5.   *Verbal A-B-C*

Croft argues that the ''activity of writing is a volitional, intentional activity, so it presupposes the domain of mental ability'' (Croft 1993: 342–343). He details how the letter *T* expands metonymically to include the English alphabet, and how the alphabet itself presupposes the notion of a writing system. The domain of writing in turn presupposes the activity of writing, and writing must be defined in terms of human communication, which presupposes the notion of meaning. Since writing is an activity, causation is also involved. Croft presents his argument in more detail than will be discussed here. However, the point to be made is that

when José signs "A-B-C", he equates knowing the alphabet with knowing how to read and write English.

When José insists that he can "A-B-C" he uses these three letters as a verb, asserting that he can write and thereby provide evidence of his intelligence. Writing and literacy have long posed a dilemma for deaf children. This educational impasse can be explained "in part by deaf students' lack of access to the English language, in multiple ways that are meaningful and comprehensible to them" (Andrews et al. 2004: 96). If José could not master the English language, he was nevertheless painfully aware that it was the portal to intellectual success.

As we have seen, the concept of letters metonymically evokes the act of writing, writing systems, writing in general, and all communication among human beings. Because everything presupposed by human activity will be presupposed by any instance of it, and knowledge structures can "grow to be extraordinarily intricate and convoluted" (Langacker 1987: 163), this extended domain structure of writing ultimately presupposes time, change, force, volition, and intention (Croft 1993: 343). When José asserts that he "can A-B-C", he is asserting quite a lot.

5.6. *THINK*

Straightness mapping The ASL sign THINK has several mappings attributable to the [G] classifier handshape: the iconic mapping of 'straightness', and the metaphors IDEAS ARE OBJECTS and IDEAS IN EXISTENCE ARE STRAIGHT (see Figure 5). THINK also serves as a reference
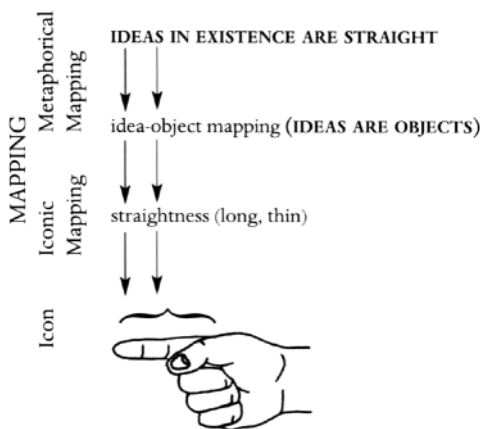

Figure 5. *Mappings in [G] classifier handshape (Reprinted with permission from Wilcox 2000: 129, Fig. 28)*

point. José is pointing to the physical and mental container (his mind) where all of his conscious thinking is taking place.

Let us look at how one powerful metaphoric conceptualization in ASL is generated. According to Lakoff and Turner's (1989: 171) commonsense theory of the Nature of Things, attributes are linked to behavior. In other words, the characteristic behavior of a form or being is a consequence of its characteristic attributes. The [G] classifier [long, thin object] hand-shape can represent a pencil if held horizontally, a vertical pole, or an upright person strolling down the street. When used to refer to a thought or an idea, however, this [G] handshape visually represents a physical attribute that is pervasively mapped onto aspects of linguistic structure by ASL users—straightness.

Humans possess higher order attributes (thoughts and character), but they also have biological, structural, instinctual, and natural physical attributes (Lakoff and Turner 1989). The GREAT CHAIN metaphor this implies, coupled with the GENERIC IS SPECIFIC metaphor (understanding a whole category in terms of one), allows humans to link vastly disparate schemas together metaphorically (Lakoff and Turner 1989: 162–181). People are able to link the schemas that characterize knowledge about humans with the schemas that characterize knowledge about physical properties. Thus, the human and the nonhuman can be seen as instances of the same thing through metaphorical mapping of the concrete onto the abstract.

Metaphorical extension of physical and natural behavior allows people to witness daily life occurrences and see the relationship between a form that is straight and extended with something that is alive and existing. When an animate entity loses its life, it undergoes several physical changes. Whereas there may be initial rigidity, the body eventually loses integrity and sturdiness. dries up, bends or topples over, crumbles, rots, becomes smaller, and eventually withers away. Conversely, a withered object or deprived being, with the appropriate amount of water, sunshine, and nourishment, may assume an upright posture of vitality and health. All of these characteristics are visible. They can serve as the source domain in metaphorical mappings for understanding thought processes (see Table 2).

Thus, ideas, thoughts, or understanding can be metaphorically understood as living visible things. We metaphorically understand thoughts coming into existence on the basis of our experience with the everyday world. We see things blooming, growing, coming into existence before our eyes. This visual manifestation of living, breathing existence maps onto our conceptualization of the understanding of thoughts or ideas in the abstract domain. Through these mappings we see that the straight deictic [G] handshape is also an icon for physical life.

Table 2. *Partial mapping for two experiential "thinking" metaphors in ASL*

ICONIC MAPPING	METAPHORICAL MAPPING	
Articulator	Source	Target
Index finger is straight Index finger is bent	Living plants, creatures Plants, animals dying or not yet born, not yet blooming	Existing, fully conceived ideas Ideas not well thought out or comprehended

In order to comprehend the ASL sign that is glossed in English as an 'idea' or a 'thought' further construal must take place (Wilcox 2000). When metaphorical mapping extends beyond one simple domain, the conceptual processes become more difficult to analyze (Croft 1991; Fauconnier and Sweetser 1996). Metaphorical mapping in ASL is complicated by the issue of an actual, physical form—a handshape—motivating an additional level of iconicity (see S. Wilcox, this issue, for a discussion of cognitive iconicity in ASL).

IDEAS IN EXISTENCE ARE STRAIGHT *mapping*　When referencing abstract thoughts and ideas, the [G] classifier handshape is a structural metaphor—IDEAS IN EXISTENCE ARE STRAIGHT. This structural metaphor can be found in other signs having to do with mental processing in ASL: UNDERSTAND, INVENT, IDEA-OCCUR, THINK-PENETRATE, and so forth.

The power of the metaphor is reinforced by its equally pervasive counter-metaphorical mapping—IDEAS NOT FULLY IN EXISTENCE ARE BENT. Some signs that evoke this metaphor are MULL-OVER, SUSPICIOUS, DREAM, PUZZLE, and WEAK-MIND.

IDEAS ARE OBJECTS *mapping*　The [G] classifier handshape can stand for a physical object (pencil, pole, person), but it also evokes a rich structural metaphor by accepting layers of cognitive mapping. Additional layers of metaphoricity occur when the handshape represents a thought, a memory, or the thinking process itself. The general conduit metaphor leads us to conceptualize words and ideas as having physical structures (Reddy 1979). The superordinate metaphor IDEAS ARE OBJECTS is a basic component of the conduit metaphor's powerful logic. When IDEAS ARE OBJECTS maps onto the [G-finger] handshape as the marker of a source-domain object, abstract ideas can move or flit through the air, the other hand can hold the G index finger tightly, or the pointing G finger can pierce

through the skull, in effect making an idea "get through my head" (Wilcox 2000). This last concept is evoked by the ASL sign THINK-PENETRATE. Langacker (1993: 30) explains that metonymy is so prevalent because it allows us to talk explicitly about things that have the greatest cognitive salience for us. THINK-PENETRATE not only maps the basic metaphor IDEAS ARE OBJECTS but also the metonymic image evoked by the [G] handshape. Deaf people often use this sign to illustrate the difficulty someone may have in understanding a complex idea. For example,

... sometimes a teacher feels that it is necessary to almost "poke" an idea through the skull of a student who does not catch on to something right away. The teacher might be required to repeat the explanation over and over until the idea is finally thrust (metaphorically) into the consciousness of the student. The G classifier evokes IDEAS ARE OJBECTS SUBJECTED TO FORCE by virtue of its isomorphic resemblance to a nail that is being hammered through a board. A "long, thin object" by virtue of its shape can become an instrument suitable for poking. A walking cane, a crutch, a kitchen knife, or a closed umbrella are all more appropriate for piercing a hole than would be a square sugar cube or a matchbox. In the abstract THINK-PENETRATE, the non-dominant hand assumes metonymic dimensions as the "wall of the brain" that an idea must be projected through. This wall represents a further metonymic extension for a container, as in the metaphor MIND IS A CONTAINER. The metaphorical referent that is highlighted by the finger icon is the act of penetration that occurs when the index fingers break through the closed fingertips. This referent is appropriate since the comprehension that occurs in the target domain when a person understands a difficult concept is metaphorically similar to the sudden force of a nail breaking through a thick partition. (Wilcox 2000: 132–134)

Layered in numerous metaphorical and metonymic mappings, José's sign for THINK represents the crux of his struggle to participate fully as a rational, socially accepted human. With his mere index finger pointing to his forehead he offers the ultimate manifestation of his ability to relate with others.

5.7.   *English sentence structure: I AM NOT M(entally) R(etarded) R-E-T-A-R-D!*

This entire sentence was signed in English word order, a language that José does not normally use. English sign systems were taught to him as a youngster in school. Whatever the reason José chose to use a manually coded English sign system instead of ASL, this emotionally punctuated sentence is the culmination of his discourse.

Elsewhere in this issue, Sherman Wilcox describes the movement to eliminate sign language from the educational classrooms following a worldwide congress of educators of deaf children held in Milan, Italy in 1880. This congress became infamous among deaf people because of a resolution that was passed unanimously (except for the American delegates) barring the use of signed language in education. In 1867 there were twenty-six American institutions for the education of deaf children, and ASL was the language of instruction use in all of them; by 1907 there were 139 schools for the deaf and ASL was allowed in none (Lane 1986: 6).

In the 1970s when José was attending secondary school, schools for the deaf still did not accept ASL in the classroom. Deaf students in José's school were encouraged to use fingerspelling in English word order or to use a type of "signed English". José, who was fluent in ASL but unable to comprehend English, faced an unfair academic challenge.

However, as many members of oppressed minority groups often do, José partially internalized the dominant group's values about his own language. Freire (1970) describes this ambivalence as *existential duality*. On the one hand, oppressed people desire to break away from their oppressor and become self-determining individuals. On the other hand, they often wish to be like their oppressors. They experience an attraction to the dominant group's values and often consider the oppressor's language to be superior to their own.

When José signed the sentence, "I am not mentally retarded", he placed the words in English order and used signs that were initialized— that is, the handshape of the ASL stem was replaced with a handshape from the manual alphabet corresponding to the initial letter of the English translation of the ASL word. For example, the form of the first-person pronoun in ASL was changed from a [G] handshape to the handshape of the fingerspelled letter *I*.

A second word that José initialized was the auxiliary verb AM. In ASL, the sign originates from TRUE, which can stand for 'certainly' or 'absolutely'.[9] The sign can also serve as a "place holder" for the auxiliary 'am' when used in English contact situations with people not fluent in ASL. This manually coded sign attaches the letter *A* from the English alphabet to the ASL stem. The sign is made near the mouth, the metaphorical seat of much negative educational and political sentiments for many deaf people.

A third initialized word was used in José's English sentence. Instead of signing WEAK-MIND, the conventional ASL word for mental defect, José abbreviates the English phrase *mentally retarded* by using two fingerspelled letters, *M* and *R*. José chose to use English when proclaiming

that he is not mentally retarded. He used the language that had helped to perpetuate the myth in the first place. At the end of an emotional discourse that had been narrated entirely in ASL, José breaks away from his natural language and wraps his most powerful statement in the syntax and lexicon of a *spoken* language code. By choosing the language of dominance—in José's mind, the language of "superiority"—instead of his native ASL, he attempts to show that he possesses superior linguistic capability.

6.   Conclusion

Many instantiations of theories and arguments that are currently being examined across the field of linguistics can be found in José's simple discourse. Metonyms such as PART FOR WHOLE, INSTRUMENT FOR THE ACTION INVOLVING THE INSTRUMENT, PLACE FOR ACTIVITY PERFORMED AT THAT PLACE, and metaphors such as MIND IS A CONTAINER, IDEAS IN EXISTENCE ARE STRAIGHT, SELF CONTROL IS OBJECT CONTROL, among many others, are found combined in the tropic structures of his narration. José's signed expressions of complex interactions of metaphor and metonymy are not random instances of unique creativity. They are regularly used cognitive phenomena that appear in the linguistic repertoire of any person, whether hearing or deaf, educated or uneducated.

Even though many of the metaphorical mappings and metonymies that occur in this analysis are frozen and not used creatively by José, there are others that are entirely spontaneous creations. He uses metaphors in the service of propelling his discourse forward and making his impassioned plea. The cohesive use of metaphor and metonymy provides an organizational strategy throughout the discourse. The mental blends, metaphors, and metonyms alternately emerge and recede, revealing José's struggle to promote his intellectual equality.

The study of cognitive linguistics can reach into the soul of a person's life and reveal experiences that are universally understood, regardless of the modality used to express them. In this article we have seen how ordinary language behavior in ASL reveals unique metaphoric and metonymic creativity. As we continue to examine linguistic structure from a communicative perspective, we find that the study of how metonymy and metaphor are used in discourse can lead to a greater understanding of human cognition.

Notes

*   Author's e-mail address ⟨pwilcox@unm.edu⟩.
1. A brief paper on this topic was first presented during the 1995 Linguistics Institute held at the University of New Mexico in Albuquerque. I appreciate subsequent discussions with Larry Gorbet and gratefully acknowledge comments from Sherman Wilcox on earlier drafts of this article. I want to also thank two anonymous reviewers for their comments. Any misconceptions are entirely my own.
2. Taken from a posting to the DEAFACADEMICS-L mailing list by Karen Sadler, 30 July 2003. Subject: "Re: [DEAFACADEMICS-L] Education". List server: ⟨deafacademics-l@list.unm.edu⟩.
3. ASL signs are represented by English glosses in upper case (e.g., GIVE). Metaphors are in small capitals (e.g., IDEAS ARE OBJECTS) and metonymies are in underlined small capital letters (e.g., PART FOR WHOLE).
4. Sign illustrations are by Kip Toddington Fletcher, E-mail address: ⟨kipf@gte.net⟩.
5. The table follows Taub's (2001) format for double-mappings.
6. Further analysis of blending reveals "body partitioning" in several of the signs, such as TO-OPEN (all key variants), push BUTTON. (See Dudis, this issue.)
7. A more thorough description of SAY as an example of *cumulative metaphtonymy* (Goossens 1990: 338) in the analysis of the sociopolitical sign, THINK-HEARING, can be found in Wilcox (2000: 92–96).
8. Graham Low (1999) offers an in depth discussion on whether one should treat personification as metaphor, specifically "Can papers think?". While this article does not take the space to react to the discussion, it includes a realization that such questions are critical to the comprehension and resolution of the issue.
9. The sign TRUE is identical in form (though not location) to the sign for THINK.

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