Event structure as a metonymic target and vehicle in the languages of the deaf

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Abstract

The paper addresses the issue of event structure in the languages of the deaf. Basing on cognitive linguistic view of metonymy as a pervasive and multi-dimensional conceptual mechanism (Blank, 1999; Lakoff, 1987; Radden & Kövecses, 1999), it argues that signed languages employ parts of events to access whole events, and that actions, objects, locations and other elements of event structure also provide mental access to such concepts as animals, food, instruments, locations, professions, and sports.

Keywords: articulation, event, metonymy, profession, signed language

1. Introduction

As living organisms, human beings are continuously active exploring their environment (Jacques, 1982, p. 118). They thus "have purposes and act in the world to achieve those purposes" (Lakoff & Johnson, 1999, p. 170) engaging in activity which requires the use of instruments so as to affect the environment over extended periods of time. The activity can be described in terms of events of variable duration and complexity. Each such event is "a segment of time at a given location perceived by an observer to have a beginning and end" (Zacks & Tversky, 2001, p. 7). In a prototypical form, it involves the precondition stage, the starting up process, the main process with its central elements and potential disruptions and/or repetitions, and the result of the main process (Comrie, 1976; Narayan, 1997a, 1997b cit. in Lakoff & Johnson, 1999, pp. 41–42, 175–176).

Human conceptualization of event structure takes various forms and frequently involves the mechanism of conceptual metonymy. Based on objective or perceptual contiguity of entities and grounded in human bodily and cultural experience of dealing with part-whole structures, metonymy allows one to access various concepts by means of indexical references to them (Evans & Green,

2006, pp. 310–322; Kalisz, 2001, pp. 103–105; Kövecses, 2002, pp. 143–162; 2006, pp. 97–113; Lakoff, 1987, pp. 77–90; Lakoff & Johnson, 1980, pp. 35–40; Langacker, 1993, p. 30; Norrick, 1981, pp. 40-69; Radden & Kövecses, 1999, pp. 18–21). Thus, complex events are often accessed by reference to their salient parts (Lakoff, 1987, p. 78–79; Radden & Kövecses, 1999, pp. 32–34; Seto, 1999, pp. 106–111). For example, the expressions:

(1) They *went to the altar*

(2) Mary *speaks* Spanish

(3) Our teacher had 100 essays *to grade*

represent getting married, using a foreign language, and correcting essays by focusing on their initial, central, and final sub-events respectively (Radden & Kövecses, 1999, pp. 32–33). In such conceptualisations, actors and their activities are frequently co-present with instruments, affected objects, products, and locations (Bonhomme, 1987, pp. 58–65 cit. in Blank, 1999, pp. 178–179), so that it is often difficult to make a clear distinction between the sub-events themselves and other elements of event structure. For example, the expression

(4) She was *sitting behind the wheel* the whole day

represents the event of driving a car by means of its central part, but also highlights the location of the agent and the instrument used by them. Because actions, instruments, objects, and locations are mutually related elements of event structure, they can also be used to access one another. For example, the understanding of *golfball*, apart from the shape and size of the entity, "requires reference to the set of rules and activities which together constitute the game of golf" (Taylor, 1995, p. 95). In a similar way, it would be difficult to explain the meaning of *food* without referring to the action of eating it.

2. Signed languages

As languages of the deaf operate in the spatial-visual mode, the articulation of the signs involves manual and non-manual parameters. The former include shape, location, motion, and orientation of the hands; the latter include facial expressions and body postures (Taub, 2001, p. 27; Wilcox, 2008, pp. 1114–1115). The use of space and vision as a medium of communication makes numerous signs iconic. Referential iconicity means that a sign is similar to the entity that it represents. For example,

Polish Sign Language (Polski Język Migowy/PJM) represents *circle* by drawing an outline of the figure. Cognitive iconicity, however, is different. It is based on "a relationship between our mental models of image and referent" (Taub, 2001, p. 19) and common in figurative signs, many of which involve conceptual metonymy (Rodríguez-Redondo, 2018; Wilcox, Wilcox, & Jarque, 2003; Wilcox, 2004). Thus, the PJM sign *record-player*, in which the extended index finger of the dominant hand makes a circular movement over the top of the non-dominant hand held palm up, employs the parameters of hand-shape and motion as the vehicle of the metonymy THE MANNER OF OPERATION FOR THE INSTRUMENT. In many languages, the sign *coffee* represents the entity by imitating the use of hand-operated coffee grinder (ESLC, 2019). It is thus based on the metonymy THE MANNER OF PREPARATION FOR THE SUBSTANCE.

3. Event structure in signed languages

Signed languages are capable of representing events with a lot of detail. For example, American Sign Language/ASL represents the event "The car drove by" by means of two separate signs: a non-classifier sign (*car*), itself based on metonymy related to the operation of the steering wheel, is followed by a classifier sign (*vehicle*) and its motion from left to right. The movement of the classifier can be flexible enough to reflect the manner of motion of the entity in the real world: change in the manner of articulation of the sign thus corresponds to the object--related change in the real world (Valli & Lucas, 2000, pp. 79–80 cit. in Zucchi, 2017, pp. 3–4). Though the concept of *car* is accessed metonymically, the event as a whole is represented in a straightforward way.

3.1. Event structure as a metonymic target in signed languages

Other events, however, are represented by means of signs referring to their successive stages. Such articulations also reflect the use of specific instruments or objects affected by the actions of the agents and are based on specific forms of the metonymy SUB-EVENT FOR WHOLE EVENT.

The sign *drink* in British Sign Language/BSL and many other languages is articulated with the full C-hand-shape moving towards the mouth and tilting backwards (Smith, 2010, p. 108; ESLC, 2019). The rounded dominant hand-shape also reflects the instrument as a part of the scenario, thus making the representation of the event more detailed. As the initial part of the event, raising a container backgrounds the central and final stages of pouring the contents into the mouth

and swallowing them. The BSL sign *eat* employs the bunched hand moving repeatedly backwards towards the mouth (Smith, 2010, p. 108) to represent putting the food into the mouth, but not chewing it or swallowing it. In the present case, the representation of the event is more skeletal: the configuration of the dominant hand does not provide any clear image of the object consumed. Both these signs are based on the metonymy INITIAL SUB-EVENT FOR WHOLE EVENT.

The sign *drive* in ASL, BSL, and other languages is articulated by means of closed hands moving left, right, and forward, which is similar to the turning of the steering wheel (ESLC, 2019; Smith, 2010, p. 87). The turning of the wheel is the central and prototypical activity of the whole scenario; adjusting the rear view mirror, starting the engine, pressing the clutch, or even braking remain in the background (Wilcox, Wilcox, & Jarque, 2003, p. 145). The sign is rich in detail because the parameters of hand-shape and motion are iconic of both the instrument and its use. The PJM sign *wash* is articulated by means of fists rubbing against each other (Kosiba & Grenda, 2011, pp. 208–209). It thus imitates the action of hand-cleaning the dirty clothes, but backgrounds the stages of soaking, wringing, and hanging them up to dry. In PJM and numerous other languages, the sign *build* involves flat hand-shapes held palm down and placed on top of each other (Kosiba & Grenda, 2011, pp. 44–45; ESLC, 2019). The articulation represents laying bricks as a central and prototypical part of the activity, but hides other elements of the process. All these signs are based on the metonymy CENTRAL SUB-EVENT FOR WHOLE EVENT.

In the BSL sign *shoot*, the dominant hand, shape-for-shape iconic[1] of a gun, tilts slightly backwards (ESLC, 2019). The motion reflects the recoil of the gun, which usually follows the moment of firing. The initial and central stages of aiming and pulling the trigger both remain in the background.[2] The underlying metonymy can be called FINAL SUB-EVENT FOR WHOLE EVENT.

3.2. Event structure as a metonymic vehicle in signed languages

Prototypical elements of event structure, such as actions and objects, function as vehicles of metonymies providing access to the concepts of animals, food, instruments, locations, professions, and sports. Actions are most commonly used, but many signs also reflect instruments, objects, or even locations. Most of them are thus based on the metonymy PROTOTYPICAL EVENT/ACTION FOR ANIMAL/FOOD/INSTRUMENT/LOCATION/PROFESSION/SPORT.

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[1] See Taub (2001, pp. 72–77) for a detailed description of this kind of iconicity.
[2] For a contrast, the phonic expression *pull the trigger* represents the central part of the activity and thus backgrounds the stages of aiming and firing.

3.2.1. Animals

Signs for animals often imitate their salient parts, such as whiskers or ears. It is, for example, the case of the BSL signs *cat* and *rabbit* (Smith, 2010, pp. 47–48), which are thus based on the metonymy THE PART FOR THE WHOLE. But the sign *frog* reflects the fact that the animal lacks similar salient properties – it is thus articulated by means of the v-shaped hand which points down and hops up on the forearm of the non-dominant hand, its fingers flexing (Smith, 2010, p. 48). The articulation is rich in detail – the flexing fingers closely represent the motion of the animal's legs as it hops.

3.2.2. Food

The BSL sign *food* and the above-discussed sign *eat* (Smith, 2010, p. 110) are based on polysemy. The relation reflects the fact that food is inextricably linked to the prototypical action of eating it. The BSL signs *dinner* and *meal* are similar in that they also employ the hands moving towards the signer's mouth (Smith, 2010, p. 110). The BSL signs *bread* and *butter* also reflect prototypical actions related to the entities, but different from eating. The former one imitates the action of cutting or slicing bread by means of the downward movement of the edge of the dominant hand towards the surface of the left palm held up; it is thus iconic of the knife, the slice of bread, and the kitchen board. The latter sign reflects the action of spreading butter by means of scraping movement of the N-shaped hand over the palm of the non-dominant hand held up (Smith, 2010, p. 115). It is thus iconic of the use of the knife over the flat surface of a slice of bread.

3.2.3. Instruments

The BSL sign *car* differs from the sign *drive* discussed above with respect to the parameter of motion: the hands imitating the turning of the steering wheel do not move forward (Smith, 2010, p. 87). However, the similarity is close enough to represent the idea that driving is a prototypical action related to a car. The BSL sign *radio*, in turn, involves two hands. Their shape and motion are iconic of the action of tuning the instrument to a selected station by means of turning the two knobs usually located on its front (ESLC, 2019).

3.2.4. Locations

The BSL sign *Sheffield* is made with the edge of the dominant N-shaped hand making small sawing movements over the edge of the non-dominant N-hand-shape (Smith, 2010, p. 110). The articulation imitates the action of cutting something or

sharpening the knives – the sign thus provides access to the location by reference to the well-known Richardson Sheffield factory producing cutlery and located in the city. In this case, however, the articulation involves two steps which form a simple chain of metonymies (Fass, 1997, p. 73): PROTOTYPICAL EVENT/ACTION FOR THE INSTRUMENT FOR THE LOCATION. In the BSL sign *Carlisle*, the dominant v-shaped hand held palm down hops several times over the left forearm (Smith, 2010, p. 27). The articulation represents the railway bridges located close to the city, which is a big railway junction. The city is thus accessed by the elements of the construction and the railway traffic related to it. The metonymic chain now has the form CONSTRUCTION FOR THE PROTOTYPICAL EVENT/ACTION FOR THE LOCATION.

3.2.5. Professions

Elements of event structure are especially common in signs that represent various professions. That is because performing a profession usually involves prototypical actions, outfits, instruments, and objects.[3] As professional activity forms an important part of an individual's life, this section is especially rich in relevant examples.

Professions accessed only by reference to outfit are few. For example, the BSL sign *clergy/minister/priest/vicar* is articulated with index fingers and thumbs of both hands touching and pulling apart at the neck (Smith, 2010, p. 46), which represents the clerical collar. The PJM counterpart is the same (ESLC, 2019). The PJM sign *nurse* draws the U-shaped hand oriented edge down over the forehead in a small arch (Kosiba & Grenda, 2011, pp. 188–189). It thus represents the cap typically worn by nurses. Finally, the Australian Sign Language/Auslan sign *mask* also represents *thief*[4] (Johnston & Schembri, 2007, p. 126). All these signs are based on the metonymy PROTOTYPICAL OUTFIT FOR THE PROFESSION.[5]

Most signs for professions in diverse languages combine reference to actions, instruments, objects, and even locations that are related to them. Actions, however, are always their most salient parts. Let us consider the following examples:

(1) The BSL sign *doctor* is made with the right middle finger and thumb tips tapping the left wrist twice (Smith, 2010, p. 46). It represents measuring the

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[3] Phonic labels for various professions, for example *screw-drivers* for mechanics or *blue collars* for physical workers in general, are based on metonymies that use instruments or parts of outfit as their vehicles.

[4] *Thief* can be thought of as a profession only on condition that stealing is a repeated activity serving as the source of income.

[5] Actions being parts of event structure are represented indirectly in those signs. In other languages, for example in PJM and German Sign Language (DGS/Deutsche Gebärdensprache), the sign *thief* highlights the prototypical action of taking objects away.

patient's heartbeat, which is a prototypical action undertaken by doctors. The PJM counterpart is similar (Kosiba & Grenda, 2011, pp. 128–129).

(2) In the PJM sign *chemist*, the fist of the dominant hand held edge down twice makes a circular motion over the non-dominant hand held palm up (Kosiba & Grenda, 2011, pp. 32–33). The articulation imitates the action of preparing medicines in a traditional way, that is, by crushing and mixing the ingredients placed on a saucer. The sign thus also represents the instrument.

(3) The PJM sign *cloak-room attendant* involves the dominant x-hand-shape held edge down and moving down in front of the chest twice (Kosiba & Grenda, 2011, pp. 264–265). It imitates hanging pieces of dress on coat-hangers and thus highlights the prototypical part of the attendant's activity.

(4) The PJM sign *cook* is made with the dominant B-hand-shape held edge down over the non-dominant B-hand-shape and making small movements left and right (Kosiba & Grenda, 2011, pp. 124–125). The articulation, which imitates the action of separating food ingredients, represents the initial stage of the process of preparing food.

(5) The PJM sign *cosmetician* is made with the dominant E-hand-shape three times touching the cheek, each time a little lower (Kosiba & Grenda, 2011, pp. 118–119). It represents putting make-up on the face, which is a prototypical action of the profession.

(6) The PJM sign *driver*, like its counterparts in most other languages (ESLC, 2019), imitates the action of turning the steering wheel. Because the operation is the central part of the driver's activity, it is regarded as prototypical for the profession.

(7) The PJM sign *economist* is articulated by means of E-hand-shapes held up, their edges inwards, and rubbing the thumbs against the other fingers (Kosiba & Grenda, 2011, pp. 74–75). The articulation is similar to the common gesture of counting money. The sign reflects the prototypical aspect of the profession by representing money as the medium of economic value.

(8) The PJM sign *fireman* consists of two parts. The first one draws the L-hand--shape backwards over the top of the head, which represents the protective helmet worn by firemen. In the second part, the hands imitate the action of using a fire-hose (Kosiba & Grenda, 2011, pp. 260–261). The sign thus represents the prototypical outfit and action of a fireman.

(9) The PJM sign *fisherman* also consists of two parts. The first one is the sign *net* articulated by 5-hand-shapes held at right angles in front of the chest; the second part imitates the motion of the net towards the signer (Kosiba & Grenda, 2011, pp. 236–237). The parameter of movement represents the final and the most important part of the action, that is, collecting the caught fish. Another version of the sign represents the use of the fishing rod (ESLC, 2019).

(10) In the PJM sign *hair-dresser*, the dominant U-hand-shape twice moves backwards over the right side of the head joining its fingers (Kosiba & Grenda, 2011, pp. 80–81). The parameter of location thus points out to the object affected, that is, hair. The motion represents cutting it. The sign again reflects the central and prototypical part of the agent's action while trimming or combing the hair both remain in the background.

(11) The PJM sign *joiner* uses the I-hand-shapes moving forward with the tips of the fingers (Kosiba & Grenda, 2011, pp. 258–259). The articulation imitates the action of planing the wood, so it also reflects the material and the instrument. The sign thus represents the initial stage of the prototypical activity of the profession.

(12) The PJM sign *laundress*[6] is articulated by means of the A-hand-shapes rubbing against each other (Kosiba & Grenda, 2011, pp. 208–209). It thus represents hand-washing the dirty clothes, which is the central and prototypical part of the agent's activity.

(13) The PJM sign *librarian* consists of two parts. The first one employs two B-hand-shapes to represent a book by means of the action of closing it; the second one employs one B-hand-shape held up with its edge outwards and moving slightly forward and right (Kosiba & Grenda, 2011, pp. 38–40). The sign thus imitates the prototypical action of putting books on the shelves. The DGS sign *librarian* is similar, but it only shows the action of putting the books on the shelves. Like in the PJM sign, the hand-shapes are iconic of books (ESLC, 2019).

(14) The PJM sign *locksmith* involves the international U-hand-shape moving forward over the non-dominant U-shaped hand (Kosiba & Grenda, 2011, pp. 270–271). As the articulation imitates the action of working metal, the central part of the agent's activity is highlighted.

(15) The PJM sign *painter* again uses the international U-hand-shape placed upwards and oriented out. It makes two movements down in the wrist (Kosiba & Grenda, 2011, pp. 138–139). The articulation represents the central and prototypical action of putting paint on some surface by means of strokes of brush. The stages of dipping the brush in the paint and cleaning it are in the background.

(16) The BSL sign *police officer* is articulated by flexing the tips of the dominant V-shaped hand as they are drawn along the back of the wrist of the non-dominant hand (Smith, 2010, p. 46). The articulation is clearly iconic of putting hand-cuffs on a person's hand, so it also represents

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6   It is identical with the PJM sign *wash* discussed in section 3.1 above.

the instrument. The DGS and PJM counterparts of the sign are similar (ESLC, 2019).

(17)   In the PJM sign *printer*, the dominant A-hand-shape held palm down twice hits the palm of the non-dominant B-hand-shape held flat and palm up (Kosiba & Grenda, 2011, pp. 68–69). The sign imitates the downward motion of the printing press. It thus represents the central and prototypical part of the instrument's operation, but backgrounds the agent.

(18)   In the PJM sign *sculptor*, the dominant 1-hand-shape "draws" inward three lines on the non-dominant B-hand-shape held up and palm out (Kosiba & Grenda, 2011, pp. 238–239). The articulation imitates the action of cutting and shaping some material, for example wood or stone. The prototypical part of the agent's action is represented also in this case.

(19)   The PJM sign *shop-assistant* employs the A-hand-shapes held edge down and palm in making alternating movements forward in the wrists (Kosiba & Grenda, 2011, pp. 254–255). The articulation imitates giving out the goods to a client. This sign thus highlights the prototypical action of the agent, which, depending on the context, can be the central or the final part of the scenario of selling and buying goods.

(20)   The PJM sign *tailor* is articulated by means of the dominant O-hand-shape rubbing with the tips of the fingers the non-dominant O-hand-shape[7] (Kosiba & Grenda, 2011, pp. 120–121). It thus imitates sewing, which is the prototypical action of the profession.

Most of the above-described signs represent central stages of actions related to the respective professions. It is centrality that makes these actions prototypical.

It should be added at this stage that the PJM signs for professions are usually preceded by metonymy-based components indicating the sex of the person: shaving as the prototypical male action; wearing earrings as the prototypical property of females. As a result, they could be interpreted in terms of simple metonymic chains (Fass, 1997, p. 73) of the following form: PROTOTYPICAL ACTION OR PROPERTY FOR SEX and PROTOTYPICAL EVENT/ACTION FOR THE PROFESSION.

3.2.6. Sports

In the BSL sign *tennis*, the fist of the dominant hand moves forward as in the striking movement (Smith, 2010, p. 79). The hand-shape points out to the fact the player holds a racket. The articulation reflects the central aspect of playing the

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[7]   The sign is similar to the PJM sign *sew* (Kosiba & Grenda, 2011, pp. 268–269).

game, which is striking the ball. The BSL signs *rugby* and *cricket* have a similar structure: the former represents holding the ball under the player's arm by means of cupped hands; the latter employs both hands in a way which is iconic of the action of batting (Smith, 2010, pp. 78–79).

4. Conclusions

As demonstrated in this study, the languages of the deaf employ elements of event structure in two distinct ways. First, signs that access various events focus on their successive stages. Based on the metonymy SUB-EVENT FOR WHOLE EVENT, they usually refer to the initial or the central parts of events because these parts reflect actions prototypical for the events more frequently than the final parts. Secondly, signs for such concepts as animals, food, instruments, locations, professions, and sports not only highlight prototypical actions, but also reflect instruments and objects used in them. That most of these signs are based on the metonymy PROTOTYPICAL EVENT/ACTION FOR ANIMAL/FOOD/INSTRUMENT/LOCATION/PROFESSION/SPORT is motivated by the fact that action is an inalienable aspect of the entities that they represent. Both these uses of event structure emphasize the role of activity in human everyday interaction with the surrounding world.

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