# Seeing the Heart of Language

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A pioneering research project on Polish Sign Language (PJM) aims to thoroughly study this language's grammar and to develop a dictionary for it, so as to make the world of deaf individuals who use PJM more accessible. Such research is also helping us garner a better understanding of the most elementary mechanisms of the human language faculty One of the most interesting characteristics of Polish Sign Language (PJM) is that its grammatical structure differs markedly from that of spoken languages, such as modern Polish or English. This stems from its use of the visual-spatial communication channel, offering completely different possibilities than the vocal-aural channel.

This fundamental distinction is manifest, for example, in the fact that spoken languages are largely permeated by linear structures, i.e. individual elements which occur in a specific order. Words follow one another in a sentence, creating a message. Sign languages, however, exhibit a wide spectrum of phenomena based on non-linear (simultaneous) mechanisms, which do not rely on such order. Another significant difference between spoken and sign languages lies in the frequency with which different types of signs – symbols, deictic references, or icons – are used.



The phrase "the car drove past the house" in Polish Sign Language is, in terms of spatial relations, similar to the real-world situation it depicts

### Polish Sign Language

Signs of the latter type, icons, occur very rarely in spoken languages, yet are widely present in sign languages.

## Iconicity in spoken language

What, then, is an "iconic sign" or "icon"? It is a sign that somehow resembles what it refers to, is in some fashion similar to it. For instance, a road sign used to signal the presence of a pedestrian crossing is an iconic sign, as it pictures something resembling a man crossing a specially marked part of a road. Other typical iconic signs include maps and plans, as well as identity sketches of criminals.

Iconic signs may be based not only on the sense of sight, but on any of the human senses – one example being "scratch-and-sniff" perfume advertisements that give off a fragrance, which is in fact an iconic sign of the advertised product itself.

Iconic signs also occur in spoken language, the classic example here being so-called onomatopoeia, i.e. words which imitate the sounds they represent. For instance, the word "moo" in English is meant to imitate the noise made by cows. Other forms, such as "mooing," are also onomatopoeic. Other English examples include drip, whisper, gurgle, rattle, whistle, rumble, and splash. It appears possible that such words as bomb or blast are also iconic signs, although the iconic component is undoubtedly weaker here.

Note that being iconic does not preclude a sign from being arbitrary. Iconic signs are indeed just as much a matter of convention as all other signs. The sound a dog makes is expressed as *woof-woof* in English, but as *hau-hau* in Polish, *gav-gav* in Russian, and *am-am* in Lithuanian. Even though each of these expressions is dif-



The community of people using PJM in Poland is around 50 000 strong. Instruction in sign language often begins at a very early age – such as at Poland's oldest institution for such education, the Falkowski Institute for the Deaf

ferent, they are all onomatopoeic, iconic signs, as their sound is meant to resemble their referent. The speakers of these languages have merely selected a different set of sounds to best resemble a dog barking.

# Iconicity vs. communication channel

Even though we can cite many examples of iconicity in spoken languages, such words and constructions obviously occur only relatively rarely in ordinary speech. Things are different for sign languages, which abound in signs that are clearly iconic. This is undoubtedly a result of the use of space as a communication channel. The communication channel employed by spoken languages, being grounded in sound, imposes restrictions on the scope of what can be expressed by means of iconic signs.

This is because an iconic sign must, by definition, be similar to the object it signifies in a certain specific respect. Olfactory signs must be similar in terms of scent; vocal-aural signs should be similar in terms of sound. Visual-spatial signs, in turn, have to somehow resemble the spatial aspect of their referent. Since the human sense of sight is well-developed and dominant in the way we experience the world, there is a whole range of visual-spatial aspects of reality we can capture and subsequently convey – provided we have adequate means to do so at our disposal.

# Three types of iconicity in PJM

Three types of iconicity can be distinguished in Polish Sign Language. In the first, a sign is similar to its referent in terms of its shape. The second type involves similarity in terms of spatial relations, the third in terms of movement (path, speed, etc.)

The first type of iconicity occurs when the hand position or the contour formed by the signer in the air somehow resembles the object that the sign should signify. This can be clearly seen in the case of such signs as *house* (both hands forming a pitched roof) and *mug* (one hand forming a cylindrical shape similar to that of a mug).

The second type of iconicity involves specific location signs (sometimes dubbed "classifiers") that serve the purpose of depicting spatial relations. For instance, the sentence the boy is standing under the tree will be signed by placing two signs next to each other, one referring to the location of the tree (with the left hand) the other to the location of the boy (with the right hand). The phrase a square surrounded by houses, in turn, will be conveyed by repeating the sign house several times, simultaneously making a semicircular movement, as if we were drawing a picture in the air showing houses surrounding a square.

Yet it is the third type of iconicity that is perhaps the most frequent in PJM: signs signifying the movement



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of certain objects in space. All verbs of movement in PJM are articulated with an element of movement, and this fact itself serves as an example of iconicity. But the similarity between a certain movement and the way it is signed can be more specific, as is the case with expressions providing a detailed indication of the path or speed of movement. Here, we can speak of a specialized group of signs (also sometimes referred to as "classifiers"). This type of iconicity occurs in the signed versions of such sentences as the car drove past the house, as well as in sentences that cannot be rendered adequately in a spoken language such as English or Polish, such as: the car was driving in such-and-such a manner (with the path of the movement being depicted in the air).

In the case of the second and third group of signs, it can be clearly seen that using Polish Sign Language frequently involves a kind of "drawing in the air" to portray certain images (scenes, maps), which may be dynamic or static. Yet there are still more manifestations of iconicity in Polish Sign Language, some of them even encompassing certain abstract grammatical mechanisms. The three groups described above only involve very simple mechanisms; situations can indeed get more complex. For instance, the sign cup is not similar to a cup but to a hand holding a cup - here we can speak of a combination of iconicity and deixis.

## Polish Sign Language research

Since iconicity does not conflict with the conventionalized nature of signs, the existence of a wide variety of iconic signs in sign languages does not entail the existence of any single universal sign language. While the sign languages used in different countries are similar in many respects, these similarities are by no means greater than the ones seen among closely related spoken languages.

The areas where the world's different sign languages are used do not always correspond with areas where spoken languages are used: Great Britain has a sign language (British Sign Language) that is very different than the one used in the United States (American Sign Language), even though the spoken language dominant in both countries is English. On the other hand, the English speaking part of Canada does use the same sign language as is used in the US. What is more, the deaf in Russia and Bulgaria use the same sign language (Russian Sign Language), even though the two country's spoken languages differ.

Linguistic research on Polish Sign Language was first begun in the mid-1990s, over thirty years later than pioneering American research was first launched on American Sign Language, or ASL (the first monograph dating from 1960). Since 1997, a group of researchers led by Professor Marek Świdziński at Warsaw University has been investigating the grammar of Polish Sign Language. Although research is still in progress, the results have so far been very promising and are indeed of paramount importance for helping us garner an understanding of the fundamental mechanisms and structure of natural language. Research on iconicity represents part of a broader project aimed at developing a classification system for PJM signs.

#### Further reading:

Farris M.A. (1994). Sign Language Research and Polish Sign Language. Lingua Posnaniensis, XXXVI.

Świdziński M., Gałkowski T. (eds.). (2003). Studies in language competence and deaf communication [in Polish]. Warsaw University, Warsaw.