

Il gesto nel mediterraneo: studi recenti sulla gestualità nel sud Europa

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Gestures and signs: what are the boundaries between them?

Introduction

In this paper I will discuss a preliminary study on the role of gesture in sign languages. My starting point is that signed and spoken languages “represent coordinate functionally equivalent modes of communication” (cfr Stokoe, Marschark, 1999, p.164), hence gesture should serve the same linguistic and cognitive functions in both languages.

We know that sign language, spoken language and gestures are linked by common perceptive, motor and cognitive systems (cfr Wilcox, 2002) and that they represent two side of a single linguistic process since:

1. In language acquisition, both hearing and deaf children use gesture for communicative purposes. At about one year, there is an equi-potentiality between the visual-gestural modality and the vocal modality (cfr Volterra, 1990)
2. There is a strong hand-thought-language nexus (Wilson, 2002), which appears to have very ancient roots (eg the hypothesis on lateralisation and the right –hand dominance, cfr Corballis, 2002). The Mirror Neurons System (cfr Rizzolatti e Arbib, 1998) seems to support such hypothesis. These neurons, located in the rostral area F5 of primates and in the Broca area of human beings, are activated by the visual perception of meaningful actions, which interact with objects, such as grab, hold etc. Such discovery has been used to support the hypothesis on the gestural origins of language according to which “at the original Big Bang of the language universe (...) we find gestures.” (Wilcox, 2002, p.126)
3. In spoken language, gestures have precise functions in the organization of sentences and in the construction of thought: “Gestures are not only an act of communication but an act of thought” (MacNeill, 1992).
4. In sign language, there seems to be a gestural level functionally similar to co-verbal gestures and it seems plausible that some aspects of signing could be seen as gestural.

What is gesture in sign language? What happens when language and gesture share the same modality? We will try to provide a preliminary description of what can be gestural in sign language and analyse its functions.

First of all, we need to define gesture. In the current study, gesture is considered as “an equivalence class of coordinated movements of some meaning that achieve some end” (Armstrong et al. 1995, p.43). It looks like a productive linguistic element, with a variable degree of conventionalization, which ranges from emblems to gesticulation (cfr Kendon, 2004) and plays a functional role with respect to the utterance.

In my view, two categories of gestures occur in sign language:

1. Non manual gestures such as mouth gestures and mouthings (cfr Sutton Spence and Boyes Braem, 2004; Ajello, Mazzoni e Nicolaj, 2001; 1997; Fontana e Fabbretti, 1999) which occur with manual signing, that is with a single sign or a complex signed structure.
2. Manual gestures among which, we can discuss some aspects of classifiers.

Mouth gestures and mouthings

In this study, I will try to discuss the suggestion of Pizzuto (2003a) according to which oral components in sign language could function as manual gesturing in spoken languages.

Research on various sign languages have pointed out that the functioning of the oral components is similar crosslinguistically (see Boyes Braem and Sutton Spence, 2001) and that they can be accompanied by voice or not, although this point is not relevant for the present discussion. The definition of this phenomenon is controversial, especially when the distinction between facial expression and oral components is not straightforward. Nevertheless oral components have been grouped into two categories according to a crucial distinction: their connection to spoken language. Even if the terminology is controversial, there is wide consensus for two categories of oral components, which are mouth gestures and mouthings.

Mouth gestures involve jaw, lips, cheeks and tongue and imply some air movement or 'noise' whereas mouthings refer to components which can be described in terms of word picturing, usually without voice.

Mouth gestures seem to be an essential part of sign language and have various roles which range from the 'phonemic' to the morphemic function. An example of the 'phonemic' role is given by the minimal pair IMPOSSIBLE/ DEAD, where the two signs are manual homonyms and are disambiguated only by the oral component (air movement and 'puffed cheek' for the sign IMPOSSIBLE). At the morphemic level, in the utterance: PEOPLE-WHO-MARCH-IN-A PARADE, the information of the verb 'march' is conveyed by the mouth gesture.

Research conducted by Fontana and Fabbretti (1999) and by Ajello, Mazzoni, Nicolaj (1997; 2001) has provided a preliminary description of the functions mouth gestures and mouthings have in Italian Sign Language (LIS)

Mouthings tend to reproduce the more relevant phonetic part of a certain word, generally a noun or an adjective, whereas verbs occur usually with mouth gestures.

It is really difficult to establish whether and when mouth gestures or mouthings are obligatory or not. What is striking is that various studies, based on different kinds of data, have pointed out similar percentage of mouth gestures and mouthings. Usually, mouthings are higher in occurrence than mouth gestures and this might mean that mouthings are considered as part of sign language and therefore are necessary. The presence of mouthings in co-occurrence with the manual sign can be redundant or functional.

- Functional mouthings usually add information and disambiguate the semantic content of manual signs which can be manual homonyms, classifiers constructions, or sign names.
- Redundant mouthings occur with a semantically correspondent manual sign apparently without any specific function.

As Ajello, Mazzoni and Nicolai (2001) have pointed out, mouthings are fundamentally unpredictable and they can be explained by referring to the particular linguistic situation of deaf people (cfr Fontana, 1998, Hohenberger, Happ, 2001). It seems that they are under the influence of sociolinguistic variables such as the addressee, the subject of the conversation and in general the communicative event. The difference between functional and redundant mouthings is not so obvious and recurrent. Most of the mouthings seems to lack any specific function and simply to mirror not only the meaning of the sign occurring at the manual level, but also the movement. This phenomenon has been defined (Woll, 2001) echophonology and shows how "the hands drive the mouth".

To consider the oral component in sign languages in gestural terms, and to view them as global non combinatorial and context-bound units, we need first to ascertain the obligatory nature of mouth

gestures and mouthings. This seems to be particularly difficult for mouthings where their obligatory nature is complicated by sociolinguistic variables. However, we feel that so far this is quite difficult also for gesture in spoken languages. We do not know in what degree gestures or oral components are necessary in a spoken or signed utterance. In other words, we do not know whether there is a *langue* of gestures.

The hypothesis on the gestural nature of oral components needs to be investigated in various directions:

- The obligatory nature of mouthings and mouth gestures should be ascertained.
- Any possible analogy between oral components and gestures in spoken languages needs to be defined.

Gestures in signing

The nature of gesture in sign language has been studied only recently. There are two main areas of research: on one hand, the analysis of some typical categories of sign languages such as classifiers as gestural whole and on the other hand, the research of the gestural unit at the level of discourse in sign language.

Research on classifiers has always been controversial. At first, the definition 'classifier' has been under attack since it comes from spoken languages and it refers to structures which appear to be fairly different in sign languages. Whereas in spoken language, such categories tend to specify the nature of the object (cfr Allan, 1977), in sign languages (*Pizzuto et alii*, 2003b) they tend to be under-specified, highly iconic and highly constrained units.

Some scholars (Liddell, 2002; Cuxac, 2001; Pizzuto *et alii* 2003; Russo, 2004) have posited that these structures consist of the combination of linguistic and gestural elements. In particular, Liddell has pointed out that the directionality is not linguistically defined and therefore it cannot be analysed in linguistic terms. According to Liddell, directional signs can be moved towards infinite locations, each of which would have a defined meaning. Cuxac (2001) argues that sign languages cannot be analysed following the spoken language categories and that these languages display a big difference: "Ce sont des langues qui disent mais aussi qui peuvent dire et montrer en meme temps: leur couverture langagière est donc plus vaste que celle des langues orales." (ivi, p.11). Spoken languages can 'show' only by making use of the visual gestural modality for example, whereas sign language can 'say' and 'show' by using classifiers, which Cuxac terms *transfert*. Iconicity in these structures allows the connection between the cognitive level and the linguistic level of a given information. Grammatical elements and gestural elements seems to coexist in sign languages, both providing essential parts of signed messages.

The other direction of research on gestures that occur in sign language is still at an initial stage. In her research on gesture, Emmorey (1999) concludes that signers do use gestures. She shows that in ASL there are two main categories of gestures: on one hand, facial and body gestural attitudes which co-occur with the manual level; on the other, manual gestures that tend to be conventional and therefore shared with the hearing community, even though they do not have any relation to the lexical manual sign. However, we think that in this kind of research, it is necessary to understand how gestures and signs are distinguished and why facial and body expression are categorized as gestural rather than linguistic.

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