Diversity across sign languages and spoken languages: Implications for language universals

Kearsy Cormier*, Adam Schembri, Bencie Woll

Deafness, Cognition & Language Research Centre, University College London, 49 Gordon Square, London WC1H 0PD, UK

1. Introduction

In the first half of the twentieth century, natural signed languages used by deaf people were erroneously regarded by many scholars of language either as gestural systems that did not display the defining characteristics of language, or as codified manual communication systems based on speech (e.g., Bloomfield, 1933). William Stokoe (1960) was the first to recognise and outline the phonological patterning of a signed language (specifically, American Sign Language (ASL)). In the 1970s and 1980s, research on ASL and other sign languages began to flourish. The main goal of much of the early work on sign languages (e.g., Klima and Bellugi, 1979) was to provide much needed evidence that sign languages were ‘real’ languages. One way to justify the linguistic study of sign languages was to propose analyses which claimed that they are also subject to the principles and constraints of Universal Grammar (UG). A number of scholars found evidence for UG constraints in ASL, such as the Wh-Island Constraint, Subjacency, and the Empty Category Principle (Lillo-Martin, 1991; Padden, 1983; Romano, 1991). Descriptive research on sign languages within non-generative frameworks has, however, always co-existed alongside work within UG approaches, with some scholars questioning the notion that signed and spoken languages are based on shared universal principles of grammatical organisation (e.g., Deuchar, 1984; Mandel, 1977). More recently, Liddell (2003) has used the frameworks of mental space theory and cognitive grammar to explore how gesture and sign language are intimately related, and to show that this sign-gesture fusion results in some typologically unique structures, such as indicating verbs.

Many sign language linguists accept that signed languages consist of both traditionally “linguistic” properties (e.g., that signed languages include symbolic, combinatorial, discrete elements and exhibit duality of patterning) together with...
gestural properties (e.g., gradient patterns, such as those found in gestures referring to size). However, those working within generativist/formalist frameworks have attempted to fit some of these properties into existing UG models, downplaying some of their distinctive characteristics (e.g., Sandler and Lillo-Martin, 2006). A significant degree of abstraction is required for these frameworks to handle gestural/gradient properties of sign languages, and some properties of sign languages have not been fully incorporated into such models.

2. Terminology borrowed from spoken languages into signed languages

Because the earliest sign language researchers were aiming to justify the linguistic study of signed languages, and many were working within a UG framework, a considerable amount of terminology was borrowed from spoken languages. Some of these terms have been more widely accepted than others for signed languages (cf. Schembri, 2003). Here we discuss the use of the terms pronoun and classifier, both of which were mentioned by E&L in the context of signed languages.

2.1. Pronouns

E&L question the validity of a set of characteristics which have been proposed as substantive universals common to all human languages. One of those characteristics is “anaphoric elements' including pronouns and reflexives” (p. 431). They cite work on various languages which reportedly do not have pronouns. In particular, they note that “sign languages like ASL (American Sign Language) also lack pronouns, using pointing instead” (p. 431). It is true that pointing signs are used for pronominal reference (among many other functions) in sign languages. Many personal pronoun pointing signs involve the use of an index finger directed towards present or imagined referents. This characteristic alone is not very different from pointing in non-signers (Kendon, 2004; Kita, 2003). However, contrary to E&L’s claim, many sign language researchers working within both UG and functional-cognitive approaches assume (and would probably explicitly argue) that there is evidence for considering these pointing signs to be pronouns in sign languages, not only pointing gestures.

Firstly, not all sign language pronouns point in the same way that gestures in many cultures point (e.g., with an extended index finger, flat handshape or thumb directed toward the referent); in most signed languages, singular personal pronouns, demonstrative and some possessive pronouns are the main types that use the pointing handshapes and orientations conventionally used by non-signers (Cormier, in press). Some plural personal pronouns, in contrast, can include other handshapes (e.g., number handshapes for signs meaning ‘the two of us’, ‘the three of you’, etc.), other movements and/or orientations (e.g., reflexive pronouns in BSL), or may be of comparatively lower indexicality (e.g., first person plural forms in ASL and BSL: Cormier, 2007). Thus not all sign language pronouns are the same as pointing gestures. To our knowledge, the systematic use of similar forms by non-signers has not been documented for all these examples, but much more research is needed on pointing gestures to make more detailed comparisons possible.

Secondly, sign language pronouns appear to behave syntactically in a similar way to pronouns in spoken languages. They are used anaphorically to refer to referents already mentioned in the discourse. Those working within generative models would argue that they are also subject to binding conditions. Thus, it is argued that in signed languages, as in spoken languages, a personal pronoun cannot occur within the same clause as a co-referential antecedent. A reflexive pronoun would be required instead (Padden, 1983). However, whether these patterns result from UG principles or reflect more general pragmatic constraints, is not clear (Levinson, 1991). Certainly, focusing on similarities in syntactic behaviour between pronouns in signed and spoken languages means that their distinctive characteristics may be downplayed.

Finally, there is evidence from the recently emerged sign language in Nicaragua which suggests that pointing, which initially was used in the same way by signers and non-signers, is taking on more pronominal properties in later generations of sign language users (Senghas and Coppola, in press). The increasingly systematic use of pointing signs with pronominal functions is interesting, but the use of this evidence to argue for the typological equivalence between these pointing signs and spoken language pronominal forms is circular, since the claims made by Senghas and Coppola (in press) partly rest on the assumption that what they are documenting is the emergence of a pronominal system.

Returning to E&L’s comment that signed languages lack pronouns and use only pointing gestures, we have shown here that the situation with regards to sign languages is rather more complex than they suggest, and that the issue of whether pronouns are found in sign languages needs further analysis. We now turn to classifiers.

2.2. Classifiers

E&L mention the category “classifier” as an example of a word class that contributes to the underestimated diversity that languages display within parts of speech systems. As examples, they mention numeral classifiers in East Asian and Mesoamerican languages and also “hand-shape classifiers in sign languages that represent the involved entity through a schematized representation of its shape” (p. 12).

The term “classifier” has been used in the sign language literature to refer to the handshape element primarily in verbs of motion, location and handling since the 1970s (e.g., Frishberg, 1975; Supalla, 1978). These handshapes represent categories of entities which have some shared characteristics (e.g. upright being, two-legged entity, vehicle), or they represent handling or manipulation of an object, or the handled object itself. These handshapes are moved or located within the signing space gradually to represent movement and location of the referents (Liddell, 2003).
Researchers such as Supalla (1978), drawing on the work of Allan (1977), originally suggested that sign language classifier handshapes resembled classifier morphemes occurring in Athabaskan languages such as Navajo. More recently it has been shown this comparison is not appropriate (Alkhenvald, 2003; Grinevald, 2000), primarily because of prior misinterpretation of the Navajo data presented by Allan (1977).

Schembri (2003) outlines defining criteria of spoken language classifiers, based on Grinevald’s (2000) typology, which distinguishes classifier systems from other types of classificatory systems. Specifically, Grinevald claims that classifiers are overt morphemes which constitute a morphosyntactic subsystem, are semantically motivated, do not classify all nouns in the language, and are subject to pragmatic and discourse conditions. Schembri (2003) notes that sign language classifier handshapes are problematic for nearly all of these criteria. Other researchers have observed this as well, which has led to a wide range of terminology other than “classifier” to refer to these morphemes. Schembri (2003) concludes that classifier handshapes in sign language verbs of location and motion, but not in handling verbs, do share some characteristics with verbal classifiers in spoken languages, a view also shared by others (Sandler and Lillo-Martin, 2006; Zwitserlood, 2003). Additionally, these handshapes appear to be incorporated into typologically unique constructions that involve fusions of categorical and gradient properties (Liddell, 2003) and share some features with gesture (Schembri et al., 2005). In the following section, we turn to how these gestural properties become incorporated into signed languages.

3. Grammaticalisation versus ‘gesture becoming language’

E&L note that “…most linguistic diversity is the product of historical cultural evolution” (p. 444). As E&L also observe, research on grammaticalisation in spoken languages has shown that morphosyntax emerges out of patterns of usage that over time become more and more conventionalised. A typical grammaticalisation pathway involves a lexical item becoming a grammatical item which then may become further grammaticalised as a bound grammatical morpheme.

Sign language research has used the single term ‘grammaticalisation’ to refer to two different phenomena: the first is the same as found in spoken languages, where the origin of the grammaticalising element is part of the lexicon of that language (Meir, 2003). The other type of change for which the term grammaticalisation has been used is actually very different: i.e. the process by which gestural and other paralinguistic communicative resources become language (Jansen and Shaffer, 2002; Pfau and Steinbach, 2006). The notion of gesture becoming language may on the surface seem like a type of historical change that must be unique to signed languages. Indeed, Haiman (1998) notes that it is not possible for words to develop out of non-words. However, he says, “we may be able to observe the genesis of codification in the stereotyping of intonation, which, as it has been often observed, lies at the border between paralinguistic and linguistic behavior” (pp. 156–157). The notion of intonation as vocal gesture is also discussed by Okrent (2002). For example, the vocal gesture of rising pitch to express uncertainty is likely to be the source of the characteristic prosodic contour of rising intonation in yes/no questions in many languages. In signed languages, the facial gesture of raised brows to indicate surprise is likely to be the source of the prosodic brow raise used most typically to signal yes–no questions and topic marking (Jansen and Shaffer, 2002). Okrent points out that one problem in distinguishing sign versus gesture is that the two are produced in the same modality and thus difficult to tease apart. But, Okrent argues, the same is true of spoken language and vocal prosody. The close relationship between visible gesticulation and auditory intonation, or vocal gestures, is well documented (e.g., Bolinger, 1986). Another example of gesture becoming language in sign languages is negation. In most European languages the manual negator resembles the negative gesture (palm away from the body, fingers pointing upwards, hand moved side-to-side) and non-manual negation involves a head shake (in northern Europe) or a head toss (in eastern Mediterranean areas), all of which are gestures used by the surrounding hearing community (Zeshan, 2006).

In addition to the historical role of gesture as a source of linguistic material within signed languages, there are many characteristics of signed languages which synchronically have strong gestural components (Liddell, 2003), as we have mentioned above. The importance of gestural elements in language is, of course, not unique to signed languages. As well as the examples mentioned above there is a very close relationship between spoken language (not just intonation) and gestures of the hands and other visible articulators (Enfield, 2009; Kendon, 2004). The form and function of co-speech gestures differ cross-linguistically (Kita and Ozyurek, 2003), and research indicates that speech and gesture develop together in children (Stefanini et al., 2009), as well as in adults learning second languages (Brown and Gullberg, 2008).

4. Conclusion

We have raised issues about the use of the terms ‘pronoun’ and ‘classifier’ in the sign language literature, not to proscribe the usage of these terms, but to echo E&L’s concern about the use of terminology for comparable constructions across languages (p. 435), and particularly across modalities. Where there is initially sufficient evidence to support the borrowing of terminology from spoken languages in sign language description, we support this approach, at least until more detailed analyses become available that argue against such accounts. Our main point here is to urge linguists to be careful in applying terminology from one language/language family/modality to another, and to consider the appropriateness and usefulness of doing so.

Additionally, in order to properly evaluate linguistic diversity and possible language universals, we argue that it is crucial to take a broad view of language as a multimodal system. Gesture, whether visible or auditory, plays an important role in both spoken and signed languages—if typologists are to take the role of sign languages in an understanding of the human
language capacity more seriously, then this cross-modal comparison requires a more thorough description of the composite nature of utterances in spoken language communication.

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