



Watching language grow in the manual modality: Nominals, predicates, and handshapes



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ABSTRACT

All languages, both spoken and signed, make a formal distinction between two types of terms in a proposition – terms that identify what is to be talked about (nominals) and terms that say something about this topic (predicates). Here we explore conditions that could lead to this property by charting its development in a newly emerging language – Nicaraguan Sign Language (NSL). We examine how handshape is used in nominals vs. predicates in three Nicaraguan groups: (1) homesigners who are not part of the Deaf community and use their own gestures, called *homesigns*, to communicate; (2) NSL cohort 1 signers who fashioned the first stage of NSL; (3) NSL cohort 2 signers who learned NSL from cohort 1. We compare these three groups to a fourth: (4) native signers of American Sign Language (ASL), an established sign language. We focus on handshape in predicates that are part of a productive classifier system in ASL; handshape in these predicates varies systematically across agent vs. no-agent contexts, unlike handshape in the nominals we study, which does not vary across these contexts. We found that all four groups, including homesigners, used handshape differently in nominals vs. predicates – they displayed variability in handshape form across agent vs. no-agent contexts in predicates, but not in nominals. Variability thus differed in predicates and nominals: (1) in predicates, the variability across grammatical contexts (agent vs. no-agent) was systematic in all four groups, suggesting that handshape functioned as a productive morphological marker on predicate signs, even in homesign. This grammatical use of handshape can thus appear in the earliest stages of an emerging language. (2) In nominals, there was no variability across grammatical contexts (agent vs. no-agent), but there was variability within- and across-individuals in the handshape used in the nominal for a particular object. This variability was striking in homesigners (an individual homesigner did not necessarily use the same handshape in every nominal he produced for a particular object), but decreased in the first cohort of NSL and remained relatively constant in the second cohort. Stability in the lexical use of handshape in nominals thus does not seem to emerge unless there is pressure from a peer linguistic community. Taken together, our findings argue that a community of users is essential to arrive at a stable nominal lexicon, but not to establish a productive morphological marker in predicates. Examining the steps a manual communication system takes as it moves toward becoming a fully-fledged language offers a unique window onto factors that have made human language what it is.

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1. Nominals and predicates in established and emerging languages

Making a distinction between nominals (nouns) and predicates (verbs) is considered essential to the “life of language” by Sapir (1921:119) and the noun-verb distinction is one of the ten properties of language that Hockett (1977:181) includes in his list of grammatical universals. Distinguishing between nominals and predicates is, in fact, one of the few linguistic properties that has traditionally been accepted as a linguistic universal (e.g., Robins, 1952; Sapir, 1921) and whose status as a universal continues to be uncontested (e.g., Givon, 1979; Hawkins, 1988; Hopper & Thompson, 1984; Hopper & Thompson, 1988; Schachter, 1985; Thompson, 1988). Not surprisingly given its universal status, a distinction between nominals and predicates is also found in conventional sign languages produced in the manual modality (see Supalla & Newport, 1978, for evidence of a distinction based on sign movement) and is, in fact, a distinction acquired early in development (see Brentari, Coppola, Jung, & Goldin-Meadow, 2013, for evidence of a distinction based on sign handshape).

Sapir (1921) grounds the universality of the distinction between nominals and predicates in the basic fact that language consists of a series of propositions. In each proposition, there must be something to talk about (identified by a nominal) and something to be said (or to predicate) of this nominal once it is introduced. According to Sapir, this distinction is of such fundamental importance that languages emphasize it by creating a formal barrier between the two terms of the proposition – the subject of the discourse, the nominal, and the commentary of the discourse, the predicate.

Nominals and predicates thus serve different discourse functions, and those roles have structural consequences. For example, in American Sign Language (ASL), the handshape used in the predicate MOVE is modified as a function of the grammatical context – if an object, say a book, is moving on its own, an *object* handshape is used in the predicate (Fig. 1A, right panel), but if an agent is moving the book, a *handling* handshape is used in the predicate instead (Fig. 1B, right panel). Importantly, the nominal BOOK does not vary as a function of grammatical context and, in this case, uses an *object* handshape in both contexts (Fig. 1A and B, left panels; Benedicto & Brentari, 2004; Brentari, Coppola, Mazzoni, & Goldin-Meadow, 2012). Type of handshape thus varies as a function of grammatical context (no-agent vs. agent) in classifier predicates, but not in the nominals that accompany those predicates.¹

What are the conditions that lead a language to make a distinction between nominals and predicates? This question is difficult to address in spoken language simply because spoken languages have long, intertwined histories (e.g.,

Atkinson, 2011) and, as far as we know, no new languages (i.e., languages that have not developed directly from an established language) are currently being developed in the oral modality. In contrast, new sign languages can, and do (Zeshan & de Vos, 2012), arise when deaf individuals live and work together in the same community, resulting in sign languages that have no historical relation to one another. There is, in fact, a sign language whose birth and development have recently been documented in Nicaragua – Nicaraguan Sign Language – and whose emergent linguistic structure did not originate in any pre-existing sign languages (Kegl & Iwata, 1989; Senghas, 1995; Senghas & Coppola, 2001; Kegl, Senghas, & Coppola, 1999). Our goal here is to explore the conditions that might lead a language to distinguish between nominals and predicates by charting the development of this distinction in Nicaraguan Sign Language (NSL); we look, in particular, at how handshape is used to make this distinction.

We observe three groups in Nicaragua whose circumstances allow us to explore the impact of different factors on the development of handshape use in nominals and predicates. In the late 1970s, the establishment of new schools for special education in Nicaragua brought together deaf individuals in numbers greater than ever before, and NSL was born (Kegl & Iwata, 1989; Senghas, 1995). Before that time, deaf children tended to socialize within their homes and neighborhoods, interacting exclusively with hearing speakers even as they grew into adulthood (Polich, 1998; Polich, 2005; Senghas, 1997). Previous work on American and Chinese deaf children who are unable to acquire spoken language and are not exposed to sign language has found that these children turn to gesture to communicate. The gestures they use, called *homesigns*, display many of the properties of natural language (Goldin-Meadow, 2003), even though the co-speech gestures that the children’s hearing parents produce when interacting with them do not (Goldin-Meadow & Mylander, 1983; Goldin-Meadow & Mylander, 1984; Goldin-Meadow & Mylander, 1998).

The first group that we examine in this study are current day Nicaraguan homesigners who have relied on gesture to communicate with hearing individuals through childhood and into adulthood (e.g., Brentari et al., 2012; Coppola & Newport, 2005; Coppola, Spaepen, & Goldin-Meadow, 2013). Our goal is to determine whether these adult homesigners use handshape in nominal signs differently from handshape in predicate signs.

Presumably the first signers of NSL were also homesigners when they came together and began to construct a shared language (Coppola & Senghas, 2010; Senghas, Ozyurek, & Goldin-Meadow, 2010). The second group we examine is this first cohort of Nicaraguan signers, and our goal is to determine whether they use handshape in nominals vs. predicates differently from the adult homesigners. We assume that the various homesign systems that were produced by the first cohort of signers when they initially came together were no different from the homesigns used by present-day adult homesigners when they were children. Accordingly, homesign and NSL have similar origins, and have been developing for a similar number of years, but only NSL has been developing within a peer community of deaf signers. Studying the signers

¹ Straits Salish is a spoken language that creates a transitive-intransitive distinction in the syntax comparable to the distinction described in the text in ASL (Jelinek & Demers, 1994). Although many details of the grammars of ASL and Salish differ (e.g., ASL has a clear lexical distinction between nominals and predicates; Salish does not), Jelinek and Demers propose a pronominal account of the transitive-intransitive distinction for Salish complex predicates that is in accord with Benedicto and Brentari’s (2004) account of complex predicates in ASL.

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