Introductory background on signed languages

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Learning objectives. After reading these notes, you should be able to:
- define modality and its components;
- define major types of modality;
- explain why there is no universal signed language;
- define iconicity and identify instances of iconic signs;
- define homesign and explain how signed languages may develop from them; and
- explain the bias in modality in linguistics and why it is problematic.

1 Modality review

We make use of the physical world to communicate with other people. This physical process begins with **articulation**, which is the way we move various body parts (such as the lips and tongue for spoken languages and the arms and hands for signed languages). This articulation creates the **linguistic signal** in which the message is carried (sound waves for spoken languages and light waves for signed languages). Finally, the linguistic signal is received by means of **perception**, in which the appropriate sensory system (auditory for spoken languages and visual for signed languages) processes the linguistic signal and sends it to the brain for interpretation. This entire chain of physical existence, from articulation to the linguistic signal to perception, is called **modality**.

The modality of a language is normally defined by its articulatory and perceptual components. Thus, since spoken languages are articulated with the vocal tract and perceived with the auditory system, their modality is **vocal-auditory**. Similarly, since signed languages are articulated with the hands and perceived with the visual system, their modality is **manual-visual**. Note that signed languages are actually articulated with many body parts, so they could technically be said to have a corporeal-visual modality, but this is not standard terminology.

Other types of modalities exist, such as **manual-tactile**, the modality of **tactile signing**. Tactile signing is articulated like signed languages, but it is felt by the other person's hands rather than being seen. This makes it a useful language for deafblind people to use, since they have impairments to both their auditory and visual systems.

We often simplify our study of languages by analyzing them as having only one modality. However, communication is frequently **multimodal**, with language users using multiple modalities at the same time (Perniss 2018, Holler and Levinson 2019, Henner and Robinson 2023). For example, while using a spoken language, various communicative functions like emphasis or emotion may also be conveyed with movements of the face or hands (Hinnell 2020). A full analysis of modality would need to take multimodality into account.

2 Basic concepts and terminology for signed languages

Before discussing the articulators for signed languages, it is important to clarify some relevant issues and terminology about signed languages and their users. Signed languages are often given little attention, or even completely ignored, in most linguistics courses, and many people (including linguists) have many misconceptions about them. For example, **there is no single universal signed language**, just as there is no single universal spoken language. In fact, there are about 100–300 signed languages in the world, approximately one for every sufficiently robust deaf community. They are as different from each other as spoken languages are, and there is no reason why we should expect different signed languages to be identical.

In some cases, especially for very concrete concepts, a sign might be **iconic**, which means there is a visual resemblance between the sign and its meaning, but different languages can still be iconic in different ways. In many other cases, especially for more abstract concepts, there may be no obvious iconicity, so signed languages can be very different. A few examples are given in the table below, which each sign hyperlinked to a video from Spreadthesign, the European Sign Language Center's (2006/2018) database of signs from languages around the world. It is difficult to imagine how anyone could guess what most of these signs mean without already being familiar with signs!

sign	language	iconicity?
APPLE	British Sign Language	very iconic, resembles the act of eating an apple
APPLE	Estonian Sign Language	somewhat iconic of any round object
APPLE	Chinese Sign Language	not obviously iconic of apple
COURAGE	Greek Sign Language	somewhat iconic of any strong concept
COURAGE	Argentinian Sign Language	not obviously iconic of courage
COURAGE	Swedish Sign Language	not obviously iconic of courage

Signed languages are also called *sign languages*. Both terms are in widespread use and would be acceptable in most contexts, but usage of *signed languages* has been increased in recent years, especially by deaf academics, so it is used here. You may sometimes see a distinction made between capitalized *Deaf* and lowercase *deaf*. The capitalized form may be used to refer specifically to a sociocultural identity of belonging to a deaf community, while the lowercase form may be used to refer specifically to the physiological condition of having an impairment to the auditory system. However, many deaf people only use one term for both concepts, especially recently, because this distinction has contributed to unfair gatekeeping and reinforcement of certain privileges among deaf people (Kusters et al. 2017, Pudans-Smith et al. 2019). We use *deaf* here to refer to both concepts.

Regardless of what you read here or in any other sources, you should be careful about the terminology you use, especially when communicating with someone who is deaf. They may have different preferences from what you have learned about, or from other deaf people, and you should respect those preferences when referring to them and their experiences and identity.

Finally, note that signs in a signed languages are often written by linguists in SMALL CAPS or sometimes ALL CAPS. The meaning may be given in the language of the surrounding text (e.g. English in this document), but you may also sometimes see it given in the ambient spoken language that is used where the signed language is used (e.g. German for German Sign Language).

3 How signed languages develop

Most deaf children are born to hearing parents, and if the parents do not use a signed language with the child, a different system may develop called **homesign** (Goldin-Meadow and Feldman 1977). Because these children are not given access to a full signed language, the homesign that develops is not normally as comprehensive as a signed language.

However, when deaf children from different households are brought together for extended periods at a time, such as in a school for the deaf, their different homesign systems may intermingle. Having access to a community of deaf people who are all trying to communicate can facilitate **the development of a full signed language**, with all the structure and complexity of any language (Senghas and Coppola 2001). A notable example of this phenomena is the development of Nicaraguan Sign Language, which occurred when deaf educational programs were established in Managua, Nicaragua, in the 1970s and 1980s. Because of video technology, we were able to document the development of Nicaraguan Sign Language, something that was not possible before with most other signed languages, which developed long before video recording existed.

In addition to the intermingling of different homesigns, deaf schools often also have teachers using some existing signed language to teach, and some aspects of it may merge into the signed language developing in the school, which can lead to resemblances between different signed languages that developed in schools with the same instructional signed language.

4 Signed languages in linguistics

Although dedicated schools for signed languages have existed since at least the late 18th century, signed languages have long been popularly believed to be less complex than spoken languages, lacking their systematic linguistic structure and expressive power. This belief was so prevalent that even linguists did not use their methods to rigorously analyze signed languages until the 1960 work of **William Stokoe**, who demonstrated that signed languages have the same linguistic complexity and structures that spoken languages do and that they satisfy any reasonable definition of *language*.

Since then, much linguistic work has been done on signed languages, though spoken languages are still the assumed default in linguistics. For example, while linguistics courses are regularly taught with little discussion of signed languages, analogous courses that do not spend significant time on spoken languages are rare, and where they do exist, they are usually overtly marked (e.g. "signed language phonetics"). It is quite common for a linguistics student to never work with any signed language data at all, but essentially all linguistics students have worked with data from many spoken languages.

This asymmetry in the field is problematic for multiple reasons. First, it treats signed languages and deafness as atypical phenomena that can be minimized or even outright ignored, which repeats and reinforces how signed languages and deaf people are treated in society as a whole. So this is an important social justice issue. In addition, from a scientific point of view, this asymmetry misses out on a huge amount of relevant knowledge. Linguists often make broad proclamations about how language works, without having checked to see what signed languages do. The field is slowly changing, one linguist at a time, but progress has been slow, and much more work is still needed.

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