relations onto the sagittal axis, which passes from the front to rear of the body (Boroditsky 2000). There are cultures that reverse the directionality. Nunez and Sweetser (2006) report that speakers of Aymara (Chilean Andes), when talking about the future, often use expressions containing the word 'back' and they often use the word 'front' when talking about the past. Accordingly, especially older speakers with limited Spanish would gesture forward to represent an event in the past while they \$\infty\$ gestured backward to represent that something will happen in the future. In contrast, French speakers, for whom the future is ahead and the past is behind, gesture forward for the future and backward for the past (Calbris 1990; see also Kita, Danziger, and Stolz 2001 for a comparison between Mopan and Yucatec, Mexico; Boroditsky and Gaby 2010 for the use of cardinal directions in the expression of time in the Australian Aboriginal community of Pormpuraaw).

The way speakers think about space or the way they map temporal relations onto space is reflected in gestural representation. Comparative systematic studies are needed to gain a better understanding of how metaphorical mappings in gesture and speech take place.

6.3.3 Summary

p. 157

Gesture is an integral part of the linguistic practices of a given speech community. The practices are manifold, and extend from communicative events like ritual speech and monologs to conversations. In everyday interaction, speakers use gesture—speech ensembles to express diverse types of meaning, including referential meaning. Gestures can be used to mark focal elements of the discourse or to provide an interpretation framework for the verbal part of the utterance, and they are used to organize the conversation. Speech and gesture together form composite signals (Clark 1996) that have to be taken into account in order to fully understand and describe certain domains of linguistic expression. When speech is not possible, gestures are used to form kinesic systems for communication.

Cultural differences shape many aspects of gesture, like the repertoire, the size, the content, orientation, the types, the use in context, and so on. Linguistic, cognitive, and social factors underlie these variations. To gain a broader understanding of how cultural differences in gestural behaviour emerge, it is necessary to study gesture in its various contexts of use.

6.4 How to Start Including Gesture in Documentation

It may at first seem daunting to include another modality in the documentation of language. But the documentation of the role of gesture in language use and of how the gestural system and the verbal system interact in communication can easily draw upon methods and techniques already established for language documentation. The work of a researcher studying gesture does not drastically differ from the \$\psi\$ work of a descriptive linguist documenting and describing a hitherto undescribed language. Gestures, like any sign, have different aspects—form, meaning, and context—that can be analysed and described. To enable such descriptions, a minimal approach can be taken by ensuring that the recordings of spoken language is of a quality which allows for (at least some) analysis of gestures at a later stage. This involves using video as the basic recording tool and following certain standards for the filming—such as framing the picture so that it minimally includes the speaker's head and upper body rather than only the face or the hands (see below for more detail). A second more elaborate step is to expand the corpus compilation by including recordings of topics and genres which are gesture-prominent. This minimal approach may be all that can be managed by a researcher whose focus is on other matters.

This section provides an introduction to such a minimal approach—namely, how to go about including gestures in language documentation, in terms both of what to record and how to record, and of how to