As shown above, speakers use gesture to express semantic and pragmatic information and to coordinate the interaction. Note that a single gesture can simultaneously perform semantic, pragmatic, and interactional functions in an utterance—these functions are not mutually exclusive.

6.2.3.1 Integrated systems for expression

Within language communities, certain domains of expression like numerals or demonstratives have a set of gestural conventions for expression. In gestural convention, hand shape, movement, orientation, or location become associated with specific semantic features. These then can become organized into a set of systematic oppositions for a broader semantic domain. As initially described by Foster (1948) for Tzintzuntzan (see Wilkins 2006), then later by Zavala (2000) for speakers of Akatek (a Mayan language spoken in the Cuchumatan Mountains of Guatemala), a gestural classificatory system is parallel to the
p. 153 classifier system in the ↳ spoken language. When Akatek speakers measure objects *in absentia* with gesture, the orientation and the hand shape of the gesture changes depending on whether the referent is, for example, a plant, a bird, a child, or a serpent. If and how this gestural system interacts with the verbal classificatory system is not known.

For Arrernte, a central Australian (Pama-Nyungan) language, Wilkins (1999; 2003) describes a fully integrated speech–gesture system in the domain of demonstrative expression. Arrernte speakers combine gesture and demonstratives into what Wilkins (1999: 30) calls 'composite demonstrative signals' that differ from those known in European languages. Speech and gesture are combined to express different kinds of information that only together provide the basis for a proper recognition of the location of the intended referent (for other conventions on pointing, see Kendon and Versante 2003 for Neapolitan area of southern Italy; for Laos see also Enfield, Kita, and de Ruiter 2007; for pointing in Zinacantán Tzotzil see Haviland 2003). Wilkins (1999) not only shows that pointing, which is often claimed to be universal, is governed by cultural conventions but also that for Arrernte a description of the demonstrative system will remain incomplete and misleading if the gestural component is excluded.

6.2.4 When gesture is organized into a linguistic system itself

Speakers also use gesture to communicate when speech is not possible because of environmental circumstances like distance or loudness or sociocultural circumstances like taboos or cultural practices that prohibit speech. Given the circumstances, 'alternate kinesic codes' (Kendon 2004a) are developed, which can be observed in stock exchanges, sports (baseball, diving), or in guiding the actions of a crane driver (Brun 1969). While the domains of expression and the level and complexity of codification in such kinesic codes are restricted in the above-mentioned examples, there are also more complex systems. Sawmill workers in British Columbia, due to the specific technicalities of the work and the loud environment, developed a gesture system not only to coordinate work flow issues but also to communicate about private matters (Meissner and Philpott 1975).

Members of some religious orders that observe a rule of silence (e.g. Cistercians, Cluniacs, Trappists) are able to communicate for long stretches of time through the use of a limited number of gestures (Barakat 1975; Kendon 1990; Stokoe 1987; Umiker-Sebeok and Sebeok 1987). Kendon suggests that contextual circumstances influence strongly how such systems develop and become elaborated.

The restricted gesture systems described above can become elaborated to what Kendon (2004a) calls 'alternate sign languages'. They are used as an alternative to speech. The Plains Indians of North America
p. 154 used a sign language as a means of ↳ communication between tribes that did not share a mutually intelligible spoken language (Farnell 1995; Mallery 1987[1880]; Taylor 1978). Such alternate sign languages have also been described for Indigenous Australians of central Australia (Kendon 1988b). For example,