Implications of a Social Origin of Human Intelligence

Workshop organized by
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Participants: Nurit Bird-David (Tel Aviv), Penelope Brown (Berlin), Peter Burke (Cambridge), Richard Byrne (St. Andrews), Michael Carrithers (Durham), Paul Drew (York), David Good (Cambridge), Esther Goody (Cambridge), Edwin Hutchins (San Diego, California), Stephen C. Levinson (Berlin), Thomas Luckmann (Konstanz), Jürgen Streeck (Austin, Texas), David Zeitlyn (Oxford).

Recent work in ethology and psychology suggests that intelligence is in a fundamental sense a social process. There is growing evidence that the rachet of primate intelligence was not tool use or adaptation to changing ecology but increasing social interdependence. Humphrey's important paper (1976) has been followed by a number of contributions building on the importance of the mental modelling of contingent responses of social others (see especially *Machiavellian Intelligence,* edited by Byrne and Whiten 1988). This faculty is coming to be known as social intelligence. For convenience it is proposed to term this non-linguistic capacity for modelling contingent interactions as `anticipatory interactive planning' or AIP. However, humans have the additional capacity for spoken language. The challenge for thinking about the dynamics of human social intelligence is to work out how cognitive psychology might take account of the social nature of intelligence; and, with the resource of language, how human social intelligence shapes, and is shaped by, cultural forms and social institutions.

The opportunity to hold a workshop at the Wissenschaftskolleg made it possible to bring together a number of scholars from different fields to explore these questions. The convenor circulated a set of preliminary working papers outlining some of the issues. Each participant was asked to respond with a working paper considering the implications in terms of their own research. Participants came from disciplines ranging from ethology (Byrne), cognitive anthropology (Hutchins, Levinson), linguistic anthropology (Brown), socio-linguistics (Streeck), sociology (Drew,

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Luckmann), social psychology (Good), anthropology (Bird-David, Carrithers, Goody, Zeitlyn), and history (Burke). Steven Levinson, co-director of the Max-Planck Project Group for Cognitive Anthropology (Berlin), generously contributed advice and hospitality; Dr. Stefan Strohschneider of the Max-Planck Project Group for Cognitive Anthropology acted as our scribe.

The workshop papers necessarily addressed a wide range of aspects of the implications of a social origin of intelligence. Richard Byrne considered the material on primate social intelligence, looking particularly at the relation between `machiavellian intelligence' and primate evolution. Edwin Hutchins presented his model of distributed intelligence which sees an individual's cognitive processes as intrinsically only one part of an information processing system; two (or more) minds are necessary to construct the system. Jürgen Streeck presented an analysis based on film of conversational pairs of the synchrony between gesture, hesitation and speech. This showed how signals of intention serve as the basis for collaborative communicative actions. Paul Drew's paper considered whether conversational analysis provides evidence for the predictability of contingent sequential actions as part of mental modelling. He concluded that sequential structures are some of the procedures through which participants discover the meaning in and goals behind one anothers' utterances. David Good's paper, also using conversational analysis, stressed the new possibility provided by language for retrospective reinterpretation of meaning as an interaction proceeds. The three papers using conversational analysis all stress (in different ways) the nature of conversation as a mutually constructed product. Stephen Levinson picked up the theme of an interactional bias in human thinking and argued that such a bias is inherently non-logical; hence human problem-solving has often been. found not to follow the rules of logic, though this is usually seen as evidence for a failure of education or intelligence rather than as reflecting the social nature of cognition. Esther Goody took the analysis of prayer as vehicle for exploring the way in which thought works in terms of dialogue, constructing an interlocutor `out there' even where none appears to exist. In his analysis of Mambila divination David Zeitlyn found that by putting questions to captive spiders diviners are constructing 'dialogues' which provide explanations for misfortune. Nurit Bird's observation in a small community of hunter-gatherers in India provided insight into the emergence in use of terms of address/reference from names and primary kin terms — a critical interface between particularistic use of language and the standardisation of forms. Tzeltal use of irony in the management of attribution of intentionality was the subject of Penelope Brown's paper; this, as with her work on politeness, approaches language

as carrying messages about social relationships as well as the manifest referential content. Irony is one form of what Thomas Luckmann writes about as `communicative genres'. His paper considered the nature of the relationship between the reciprocal adjustment of perspectives characteristic of the negotiation of meanings in conversation and communicative genres, where participants share models for a given type of communicative act. Luckmann's and Brown's accounts of communicative genres provide an important link between the interactive management of individual cognitive modelling and the tools through which this becomes a social and cultural product. Peter Burke's analysis of formal insults in sixteenth-seventeenth century Rome proved a further instance of the strategic use of communicative genre. Finally, Michael Carrithers' paper on narrative thinking adressed the question of how cultural accounts of events are built up from individuals' shared social experience. He argues that some such process of shared narrative construction must underly all cultural representations.

Discussion of the working papers was lively, and continued at meals and in the evenings thanks to the informal setting provided by the Wissenschaftskolleg. Several general themes emerged, and these, together with the revised papers will be collected in an edited volume.

References

Humphrey, N. K., "The social function of intellect". In: P. P. G. Bateson and R. A. Hinde (eds.), *Growing points in ethology.* Cambridge 1976, pp. 303-317

Byrne, R. and Whiten, A. (eds.), *Machiavellian intelligence: Social expertise in monkeys, apes and humans.* Oxford 1988