

EXPRESSED AND UNDERSTOOD GESTURAL REPERTOIRES OF WILD BONOBOS
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Research on great ape gestural communication has hitherto prioritised the signaller, focusing on the *expressed* repertoire, the set of gesture types that an individual deploys. In this study of wild bonobos (*Pan paniscus*), we also examine the *understood* repertoire, the set of gesture types that a recipient understands: a recipient understands a gesture if they respond to the signaller with an Apparently Satisfactory Outcome (ASO). Combining the understood *and* expressed repertoires substantially expands an individual's overall repertoire. Hence, we propose that including the understood repertoire better represents an individual's actual communicative repertoire, and may for the first time reveal gesture types received exclusively by specific subsets of individuals. Significant differences between expressed and understood repertoires might result from two things: (1) gestures are ritualised between signallers and recipients and may therefore be unidirectional in some cases, or (2) the circumstances of use differ among age-sex groups, limiting the need for an individual to use a certain gesture type. In the latter, we expect consistency in particular age-sex groups whereas unidirectional comprehension as a result of ritualization would predict random distribution among individuals. We further compare our dataset with and without gesture instances occurring in play, as play may be a context in which individuals deploy gestures that they rarely or never use otherwise. Assessing the understood repertoire is a useful tool for animal communication researchers, not only allowing shorter study-periods, but also to discover gesture types specific to subsets of individuals, which may reveal much about a species' social behaviour.