

Lowland gorillas found to use gesture 'baby talk' with their young

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Male silverback Gorilla in SF zoo. Image: Wikipedia.

(Phys.org) -- With humans, mothers and other adults have developed a whole separate way of communicating with infants, toddlers and even teens, but that kind of purposeful conversing style is unique; among primates only the rhesus macaque has been found to alter its vocalizations for the young. Now though, two researchers studying captive western lowland gorillas have found the animals use a slightly different form of communication when conversing with their young. After studying many hours of tape, the two: Eva Maria Leuf and Katja Liebal, as they describe in their paper published in the *American Journal of Primatology*, have found that gorilla mothers use special hand gestures to get their point across to their young and tend to repeat them till the message is understood.

Lowland gorillas have a variety of gestures at their disposal for communicating with one another as they lack an oral language. They use hand and body gestures as well as [facial expressions](#) to convey what it is they have on their minds. Adults may sweep straw at one another, as an example, to invite the other to play. Others may touch hands

to show they have nothing in them, or to initiate other contact. Most adults also lightly press a flat palm down on another's head to indicate that they are done with whatever the two of them have been doing together; a gesture the researchers found mothers use extensively and repeatedly with their young.

With the infants the researchers found such gestures can be exaggerated and repeated and sometimes some are used exclusively when communicating with their offspring. They found this out by taking 120 hours of video footage of gorillas interacting at Howletts and Port Lympne Wild Animal Parks in Britain and Leipzig Zoo in Germany. In watching the animals interact, the two noticed that the adults communicated in slightly different ways when addressing the young, and that the mothers in particular seemed to be speaking in a form of gesture based baby talk, they describe as "non-vocal motherese."

In general the researchers found that mothers engaged in gentle touching and stroking of their little ones, particularly on the face, sometimes using gestures that were never used among adults. They also used light slaps on occasion to get the infants to understand them, an altered form of communication among adults. In addition it was noted that all of the adults tended to repeat gestures when communicating with the young, a sign that they were clearly aware of the fact that the babies were still learning the lingo.

More information: Infant-Directed Communication in Lowland Gorillas (Gorilla gorilla): Do Older Animals Scaffold Communicative Competence in Infants? *American Journal of Primatology*, DOI: 10.1002/ajp.22039

Abstract

Infant-directed speech is a linguistic phenomenon in which adults adapt their language when addressing infants in order to provide them with

more salient linguistic information and aid them in language acquisition. Adult-directed language differs from infant-directed language in various aspects, including speech acoustics, syntax, and semantics. The existence of a "gestural motherese" in interaction with infants, demonstrates that not only spoken language but also nonvocal modes of communication can become adapted when infants are recipients. Rhesus macaques are so far the only nonhuman primates where a similar phenomenon to "motherese" has been discovered: the acoustic spectrum of a particular vocalization of adult females may be altered when the addressees are infants. The present paper describes how gorillas adjust their communicative strategies when directing intentional, nonvocal play signals at infants in the sense of a "nonvocal motherese." Animals of ages above infancy use a higher rate of repetitions and sequences of the tactile sensory modality when negotiating play with infants. This indicates that gorillas employ a strategy of infant-specific communication.

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