

## **Visual Communication: Facial Expressions and Gestures**

Primates depend upon well-developed vision for locating brightly colored fruit in the green forest, maneuvering through tangled arboreal pathways, and spotting predators and neighboring groups sharing their range. Within the highly social primate group, individuals communicate with one another visually.

Visual signals may carry information about age, sex, reproductive state and rank. For example, the distinct coat color of infant primates identifies their dependent and vulnerable status to other group members. Bright pink perineal swellings advertise the sexual state of females. Lavender or turquoise-colored ano-genital regions of mandrill and vervet monkey males indicate the signs of sexual maturity and high rank.

In close-up social interactions, individuals communicate face to face. Facial markings and the underlying muscles promote the use of the face for expression. Muscles of the mammalian face and scalp originated from the neck muscles of ancestral reptiles. These “new” facial muscles are anchored between the skin and facial bones. On the scalp, the newly evolved mammalian outer ears became mobile for hearing at night. Primate facial muscles are more differentiated than those in other mammals, so that facial expressions can be used to communicate complex and subtle meaning in everyday social interaction.

Facial expressions serve an important function in communicating emotions, moods, and intentions between and among individuals. Anthropologist Paul Ekman maintains that human facial expressions accurately reflect emotional states that are communicated to others and therefore are universal cross-culturally. For all primates, this face-to-face interaction begins at birth, when an infant primate maintains close proximity to its mother and often looks into her face. Individuals learn how to communicate their needs through appropriate visual cues. Similarly, they learn to “read” other in the group, anticipate their actions, and adjust their behavior accordingly. Visual signals and nonverbal behavior can communicate “loudly” to others!

Notice that different parts of the face can change position independently, thereby creating an expanded repertoire of subtle expressions. A primate’s mouth and eyes are the most important components of a facial expression. The eyebrows can move up or down, to the middle or outward. A direct, wide-eyed stare is a threat expression for most primates; averting the eyes downward conveys submission. The highly mobile lips can be protruded forward, pushed tightly together, or retracted over the teeth while the jaws are open or closed.

Facial expressions are often used in combination with vocalizations which draw attention to the facial signal and punctuate its message. The chimpanzee “hoot face” expresses excitement and affection, as when two individuals reunite after foraging separately for most of the day. The “play face” is observed most often among juveniles engaged in rough and tumble play and in infants when they are tickled. The “glare” is easily recognized because we use it when we are angry; chimpanzees do too. The “silent bared teeth” expresses submission, as when a young chimpanzee wishes to express that it intends to antagonism and does not wish to challenge the social authority of an older animal. A crouched body posture may accompany the facial signal and emphasize the younger animal’s lower standing.

Similarities in the facial expressions of chimpanzees and humans are due to our nearly identical facial musculature. Some facial expressions even serve common functions for the two species. For example, the play face is thought to have evolved into human laughter. Many researchers think that the silent bared teeth expression is equivalent to the human smile. Association of the smile with human enjoyment is not universal, for in many cultures smiling may be a sign of apprehension and discomfort.

Male baboons use an extreme facial expression, called the canine display, which exposes the teeth and threatens potential intruders. In other circumstances, the canine display notifies group members that the male can defend his social position if necessary, and to stay out his way, to move off, or to give a submissive response. Notice the lower eyelids (color is important here too) as part of the visual signal.

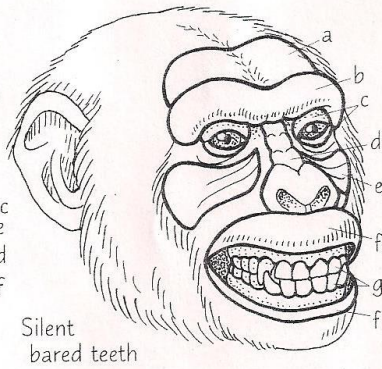
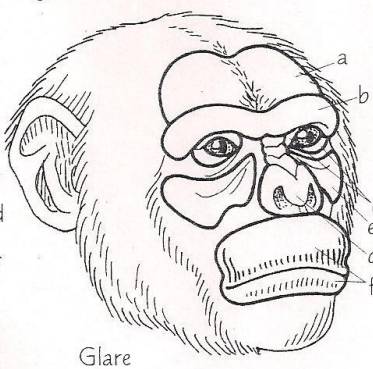
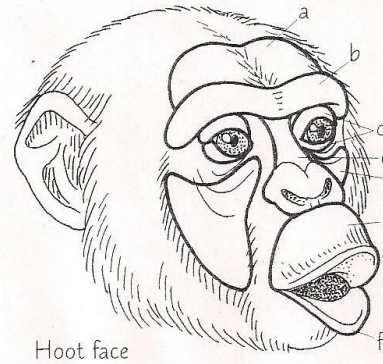
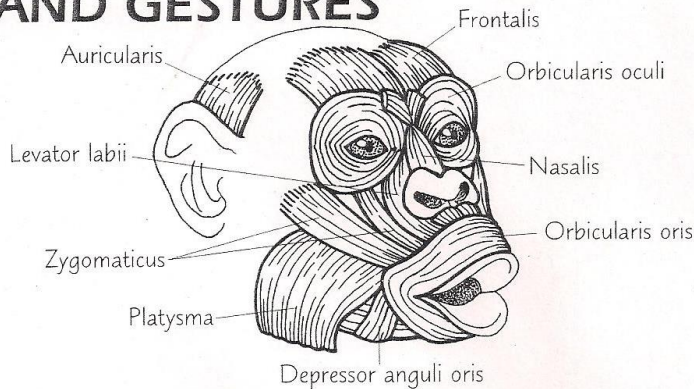
Gestures often involve the face, especially the directional gaze of the eyes, along with other body parts. When Jane Goodall first reported on chimpanzee gestures she observed at Gombe, the world was amazed at their “humanness.” Chimpanzees may beg for a morsel of food by leaning forward, reaching out an arm and holding a palm upward under the possessor’s chin, while gazing intently between the desired item and possessor. Chimpanzees convey reassurance by extending an arm to encircle another individual and giving a reassuring pat.

Primatologist Joanne Turner documents a remarkable combination of facial expression and gesture. A young female gorilla uses her hand to hide her play face from a silverback male in order to conceal her motivation to play.

Charles Darwin noted that human gestures and facial expressions, like our mental abilities, are adaptive and have evolved through natural selection. Although humans have language, we also communicate face to face using facial expressions, gestures, and body postures, often employed simultaneously. The ability to read visual signals, to gauge how others are feeling and how they might act, extends the range and subtlety of primate as well as human communication, thereby contributing to the adaptability of primate social life.

# FACIAL EXPRESSIONS AND GESTURES

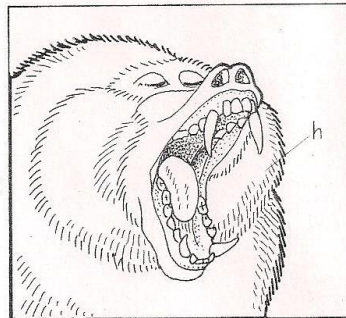
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VISUAL COMMUNICATION:  
FACIAL EXPRESSIONS AND GESTURES



FOREHEAD<sub>a</sub>  
EYEBROW<sub>b</sub>  
EYELID<sub>c</sub>  
NOSE<sub>d</sub>

CHEEK<sub>e</sub>  
LIPS/MOUTH<sub>f</sub>  
TEETH<sub>g</sub>

CANINE  
DISPLAY<sub>h</sub>



GESTURES\*

BEGGING<sub>i</sub>

REASSURING<sub>j</sub>

CONCEALING  
PLAY FACE<sub>k</sub>

