

Roots of Human Behavior



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Roots of Human Behavior
By Viktor Reinhardt

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I dedicate this book to

you

who alleviates human-inflicted
suffering of animals.

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INTRODUCTION

Exploring the roots of human behavior, I have searched for photographic documentation of behavior patterns that humans share with other mammals, and sorted the behaviors according to their motivations.

A motivation is a buildup of inherent energy that prepares the subject to perform a specific activity. In this book, motivations are categorized as:

1. socially positive—the subject has the urge to get in contact and keep contact with a social partner;
2. socially negative—the subject has the urge to increase the distance from a social partner; and
3. non-social—the subject's interest is not focused on any social partner.

This book has been inspired by a deep reverence for all living creatures. It is my wish that it will foster a similar fascination in the reader, who is responsible for the well-being of mammals, and encourage us to do our best to make the lives of those in our care free of avoidable distress.

I am grateful to the following colleagues, friends, relatives and Flickr members who generously shared photo material for this book: Hrafnhildur Árnadóttir, Ayyashi, Ellen Baker, Izla Kaya Bardavid, Alex Barnes, Bart, Donna Beane, Damon Billian, Bookhouse Boy, Emily Bradley, Leah Bryant, Brian Burke, Brittney Bush, Jamie Caffrey, Cliff, Steve Collins, Tudor Costache, Daniele Costantini, Doug Cowley, Daniele, Michael Dillingham, Khair-ed Din Husseini, Bob Dodsworth, Irenäus Eibl-Eibesfeldt, Tim Ellis, Steve Evans, Jennifer Fehr, Jerry Feist, Randy Fish, Mike Fitzgerald, Pete Foley, Holly Garner-Jackson, Garry DC, Mike and Christine Gartner, Holly Garner-Jackson, Paul Genge, Keith Gentry, Brent Geoghegan, Phil Gibbs, Vladimir Gitin, Maria Glowinski, Tamara Godbey, Emily Godlevsky, Su-May Goh, Zaida Gudenus, Eric Haas, Justin Hall, Francis Halliday, Evan HB, Evan Hambrick, Charles W. Hardin, Steve Hardy, Ben Harris-Roxas, Lori Harrison-Smith, Dan Harrod, Peter Hasselbom, Thomas Hawk, Wayne Holt, Tom Hoops, April Huff, Lina Hughes, D. Hutcheson, Jack Hynes, Jess Jackson, Ernst Jansen, Jochen Jansen, Andrew Johnson, Martin Jordan, Tomi Tapio Kärkkäinen, Karen, John Keogh, Goni Ketain-Meiri, Debbie King, In Cheri Kim, Princess Kim, Bryan Koylass, Laura, JD Lasica, Rich Legg, Justin Lenk, Philippe Leroyer, Mick Levanon, Ricardo Liberato, Todd Lindberg, Glenn Loos-Austin, Nicholas Lopez, Lucia, Kenneth MacPherson, Tony Mangan, Alessandra Mariani, Irene Martinelli, Liz McCoy, Chris Metcalf, Mikhail, Nicholas Mitchell, Amir Mukhtar, Jasper Nance, Geoffrey Oddie, Michael Oryl, Nano Paciocco, Richard Padgett, Macorig Paolo, Patrusche, Paul, Tara Pavese, Amanda Peskin, Rob and Ale, Robert Pierce, Frederic Poirot, Michael Poliza, Karen Polyard, Joe Porter, Courtney Powell, Princessrica, Maria Pratt, Shrisha Radhakrishna,

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Almost all donated photos are included in the book. When photos were very similar, I had to make a selection; therefore, some donated photos do not appear. Others were purchased from iStockphoto, Getty Images, Minden Pictures and professional photographers. Photos that were not associated with a name are listed under “Anonymous” in the Photo Credit section.

I am very grateful to Cathy Liss, Alexandra Kleinkopf and Annie Reinhardt who carefully read the draft of this book. The final version greatly benefited from their corrections and constructive comments and suggestions. Many thanks are due to Ava Rinehart for preparing the layout of the first printing in June 2009 and to Alexandra Alberg for exchanging several of the original photos in the second printing in January 2019.



Viktor Reinhardt
Mt. Shasta, California



CHAPTER ONE

NON-SOCIAL EXPRESSIONS OF EMOTIONS

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CONTENTMENT

Contentment is an emotional state in which the subject neither wants nor dislikes something.



Contentment is reflected in the absence of a specific motivation.





Comfort-yawning
can be an expression of
contentment.

This gesture is shown by humans and many other species: While taking a deep breath, the mouth is wide open—usually as wide as possible—and the neck stretched; typically the eyes are closed.

Yawning can also serve as a displacement behavior; in this context, the eyes are kept open (photos 23 and 24).

As distinct from threatening (photo 264, page 123), yawning is not directed toward anybody. A yawning subject has no aggressive intention.



9



10



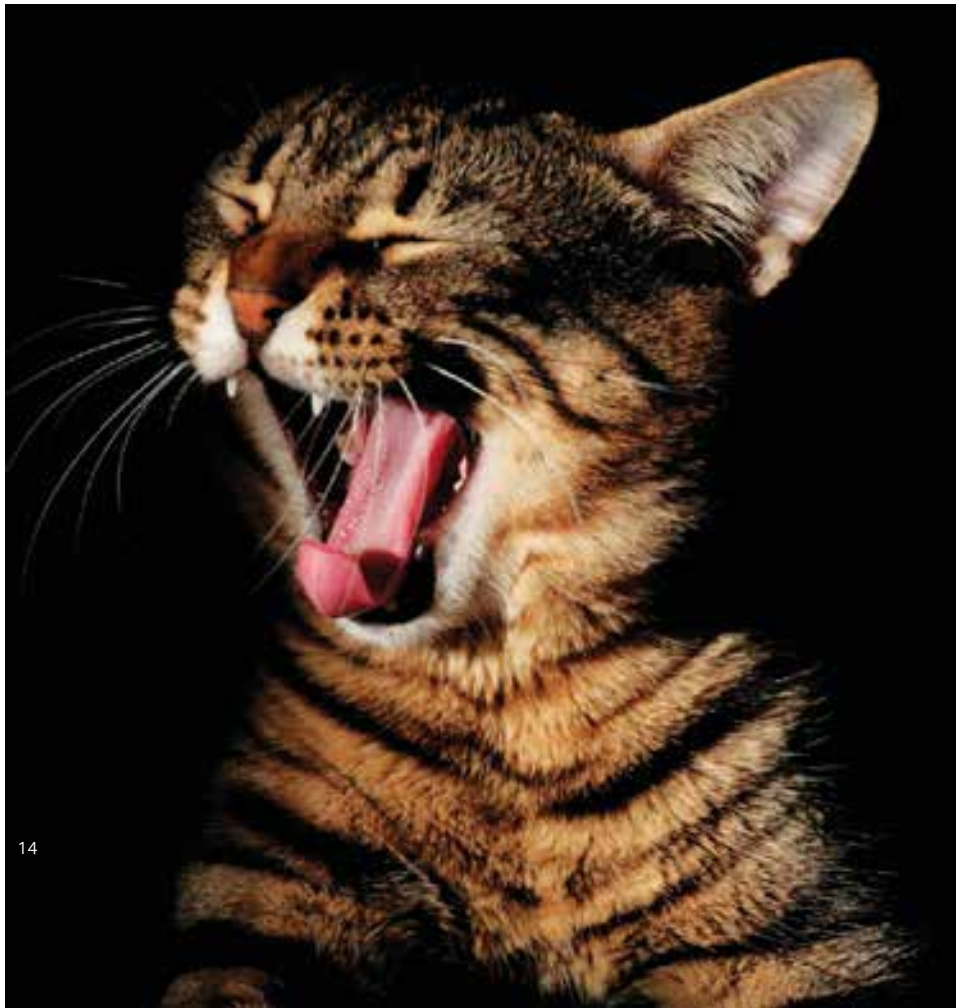
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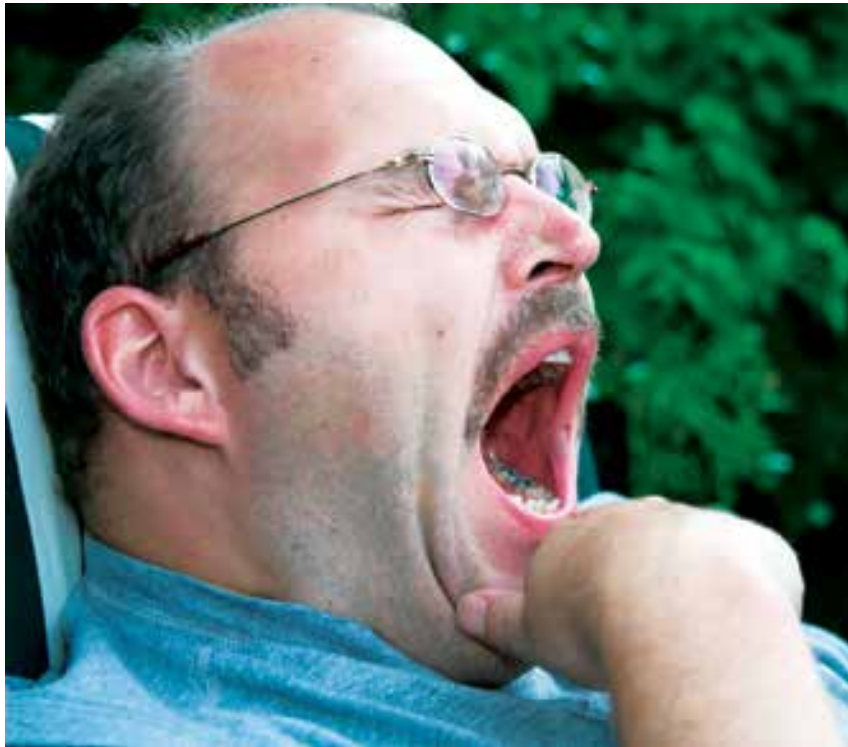
13



12



14



15



17



16

Since the teeth are usually exposed during yawning, the gesture can easily be misinterpreted as an unfriendly behavior. It is therefore a custom in humans to place the hand over the open mouth while yawning (photo 16).

UNEASINESS

Uneasiness is an emotional state in response to conflicting motivations (e.g., attacking and fleeing).

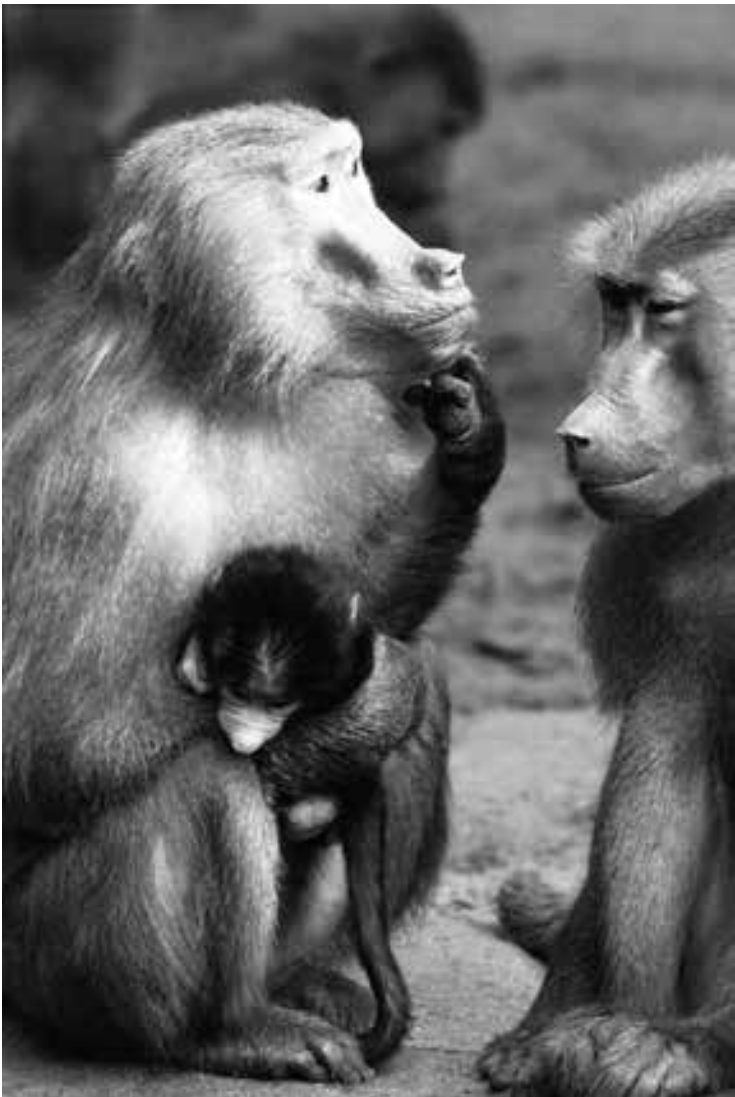
Uncertain of how to respond to a specific situation (e.g., confrontation by a stranger), the subject often shows substitute activities (displacement behaviors), such as yawning and self-scratching, which have no explicit meaning.



18

Displacement-scratching

of the head or other parts of the body is shown not only by people, but also by dogs, monkeys and apes when they are in conflict over how to react in a given situation.¹⁻⁷



19



20

For example, the dog in photo 20 wants to chase after a rabbit who has just passed by, but he remains stationary because the person accompanying him strictly says, “No!” Rather than doing nothing at all, the dog scratches his body and, by doing so, gets some relief from his frustration.



21



22



23

Displacement-yawning

is always associated with a specific source of disturbance.



24

In contrast to comfort-yawning, the eyes are kept open; in contrast to threatening, the teeth are not exposed.

The woman in photo 23 feels harassed and uncertain if she should go away.

The male rhesus macaque in photo 24 protectively cradles an infant; he feels uneasy being watched and would rather move out of sight.

FEAR

Fear is an emotional response to an imminently dangerous situation (e.g., being cornered).



25



26

The fear face is shared by dogs, monkeys, apes and humans: The lips are retracted, thereby exposing the teeth.



27



29

The mouth is only slightly opened when the intensity of fear is moderate (photos 27 and 29); it is widely opened when the intensity of fear is high (photos 28 and 30).



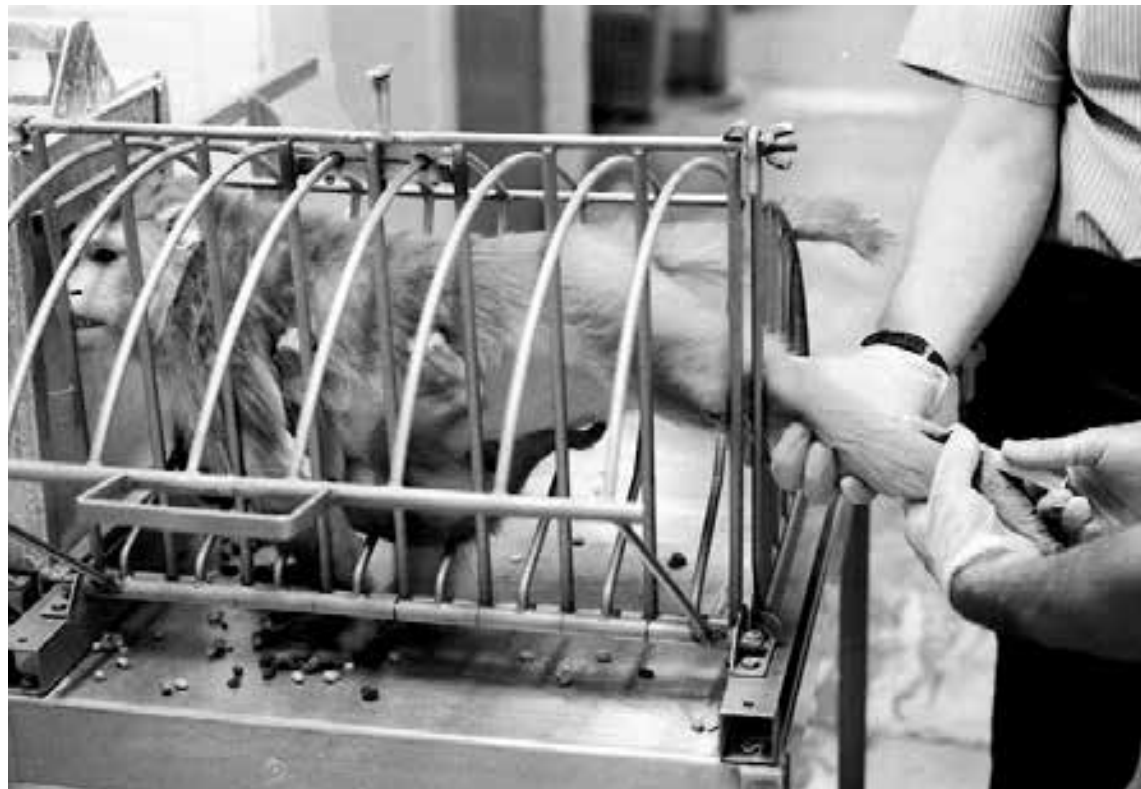
28



30



31



32



The emotion of fear is always mixed with aggression, which means that a subject in fear is ready to flee, but if this is not possible (e.g., the subject is restrained), she or he will attack in self-defense.

Restraining animals during procedures puts the handling personnel at a particularly high risk of being the target of aggressive reactions (photos 31 and 32). Training them to cooperate rather than resist is a safe alternative (photo 33). Animals who cooperate during procedures show no significant stress reactions; 8-18 they are free of fear (photo 33).

DISTRESS

Distress is the inability to adapt to a condition (e.g., a barren cage) or to a situation (e.g., enforced restraint) that induces a conspicuous alteration in the subject's physiological equilibrium (e.g., significantly increased blood pressure) and/or psychological equilibrium (e.g., intense fear, self-directed aggression, hair-pulling).



Humans share behavior patterns and postures with other species that are indicative of a subject in distress.

34

Compulsive hair-pulling-and-eating is a common behavioral pathology in monkeys and apes kept in research laboratories.

This bizarre behavior has not been observed in wild animals, so there is a consensus that its appearance in the captive environment reflects distress resulting from species-inadequate living conditions, especially boredom. Subjects seem to have a persistent urge to pull their hair. Often they fumble with the removed hair using their lips and finally swallow it.

Self-directed hair-pulling

typically results in progressively increasing patches of baldness (alopecia; photos 34 and 37).

Attempts to cure individuals from this compulsive behavior have been without success.¹⁹⁻²³

Dogs and cats who suffer from extreme boredom and lack of exercise often develop psychogenic alopecia, a compulsive licking of the fur in a specific area and pulling of the irritated hair.

Environmental enrichment programs may lead to a temporary improvement, but recurrence of the behavior is typical.²⁴⁻²⁶





36



37

The irresistible urge to pull out the hair and often eat it is termed trichotillomania in human subjects, where it is classified as a mental disorder. The disturbance causes clinically significant distress or impairment in social, occupational or other important areas of functioning.²⁷ It can have serious implications resulting in the formation of hairballs in the stomach.²⁸⁻³¹

There is currently no effective cure for trichotillomania.³²⁻³⁶



38

Hair loss alone does not justify the conclusion that a subject suffers from compulsive hair-pulling, unless the behavior has actually been witnessed.

In nonhuman^{23, 37-39} and human primates,⁴⁰⁻⁴⁵ hair loss can also occur spontaneously when the subject is exposed to distressing living conditions.

The chimpanzee in photo 38 has lost much of her hair, not as a result of hair-pulling, but as a result of permanent imprisonment. The person in photo 39 has lost much of his hair while grieving over the death of his wife.



39



Compulsive self-biting

has been observed in captive monkeys and apes.^{20, 46-53}

This behavioral pathology typically occurs in socially deprived individuals in association with boredom and frustration. Often, self-biting leads to serious lacerations. When no visible injury is inflicted, self-biting usually goes unnoticed.

Transferring afflicted animals to compatible social housing arrangements significantly reduces⁵⁴⁻⁵⁶ or eliminates this behavioral pathology.^{57, 58}

40



41

Compulsive self-biting also occurs in dogs and cats,^{59, 60} as well as in humans, where it may be triggered by boredom, depression, anxiety, psychosis, pain or incarceration.⁶¹⁻⁶⁴



42



Depression

is an emotional state of apathy, sadness, helplessness and disinterest.

Many species, including rats, mice, hamsters, dogs, pigs, monkeys, apes and humans take a hunched position when they suffer from depression, resulting for instance from social deprivation, helplessness and chronic boredom.

Enforced living conditions that induce this kind of response in any mammalian species are not ethically acceptable.



44 45





46



47



48



49



CHAPTER TWO

SOCIAL EXPRESSIONS OF EMOTIONS

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Social creatures like to live with companions, but they also want to have their own space and will compete over limited resources. These conflicting motivations are expressed in socially positive and socially negative behavior patterns.

SOCIALLY POSITIVE BEHAVIORS

Socially Positive Behaviors are activities and gestures that bring individuals together and allow them to stay in close proximity.

51



FRIENDLY CONTACT BEHAVIOR

*Friendly Contact Behavior
reflects the social attraction
of companions.*



52

Contact vocalization probably occurs in all mammals.

In a troop of monkeys or apes (photo 54), a group of pigs or guinea pigs (photo 53), or a gathering of people (photo 52), there is usually a constant, soft background chatter going on. Companions are probably not exchanging important information while continuously talking, grunting, squeaking or chirping back and forth, but they have a strong urge to keep some kind of contact with each other. When this “small talk” stops, individuals quickly start to feel uneasiness, perhaps even tension, which is relieved the moment one individual resumes the “conversation.”



53



54



55

Head-tilting allows individuals to have eye contact with one another without triggering tension.

Mammals quickly get uncomfortable when someone looks straight into their eyes, unless it is somebody they can trust unconditionally. The reason for this response is probably the fact that being looked at can be interpreted as a threat.

In order to mitigate the potentially negative message that goes along with looking into the eyes of another subject, many species often tilt their heads while looking at another partner with whom they want to have contact. Humans usually smile while tilting the head, thereby emphasizing their friendly intention (photo 56).



56



57



58

Smiling is an expression of friendly contact readiness.¹

Smiling occurs in dogs, monkeys, apes, and humans: The face is relaxed and the eyes *gently* focused on another partner. The corners of the lips are slightly raised; this makes the cheeks more pronounced and can result in a partial exposure of the teeth.



61



59



60

The lady and the dog are both calmly smiling in photo 59; they are both smiling more intensively, with the lips parted, in photo 60.



A smiling face is “cute” and “happy” and elicits affection rather than antagonism.



63



65



66



64

The female macaque in photos 64 and 66 is tickled by the author. She holds his hand, thereby encouraging him to continue tickling. Her smile gets more pronounced in the process, suggesting that she enjoys the interaction.



68

Friendly grinning is an unmistakable expression of “I’m glad to see you!”

The corners of the lips are now raised and retracted, thereby exposing both upper and lower teeth.

67



69



70

The pricked ears are a clear indicator that the grinning horse in photo 71 is not in an aggressive mood but is greeting the other horse. Horses share this friendly greeting gesture with zebras.²





72

Friendly laughing is a facial expression that is shown by a great variety of species, including humans (photo 72), chimpanzees (photo 73), bears (photo 76), dogs (photo 80), lions (photo 79) and macaques (photo 82).



73



74

Laughing is associated with playfulness (photos 74-80 and 82). With the corners of the lips fully retracted—not stretched as when yawning—the mouth is wide open, exposing both rows of teeth (photos 72-74). The aperture of the mouth is broad rather than vertically elongated, as when yawning (photos 15 and 17, page 9).

While laughing with each other, partners maintain eye contact most of time, reassuring one another with the “play face” that they have friendly intentions (photos 74-76, 78-80 and 82).

Malicious laughing is probably a human-specific gesture.



*“It’s fun to play with
you, little guy!”*

75



*“You’re my buddy!
Let’s wrestle with
each other; I won’t
hurt you!”*



You can laugh best with a friend!



*Laughing
together is a sign of
mutual affection.*

79



80



81



82



83

While laughing, the teeth are exposed in a similar manner to threatening. Both expressions can be misinterpreted if the context in which they appear is not known. For example, the laughing face in photo 81 looks very similar to a threatening display of the teeth in photo 260 on page 122, but it is actually an expression of the extreme joy of a person who just has won a tennis tournament.

In order to avoid misunderstanding, humans often place a hand over the mouth when they laugh in public (photos 83 and 84); they show a similar hand movement when yawning in public (photo 16) to make sure that their exposure of the teeth is not taken as a threat.



84



85

Touching a social partner is the basic physical contact behavior that human primates share with nonhuman primates.



86



87



92

88



89



90

Being touched by a companion is comforting.



91



92



93



94

It feels good to “be in touch” with a good friend.



95

Dogs, cats and many other nonhuman mammals like to be touched by people they can trust.

It is not only the dog or cat who gets calm and relaxed through human touch, but the human who gently touches the other creature also experiences a mental state of ease.



96



97



98

Grooming (social body care) occurs in almost all social animals, with the notable exceptions of bison, sheep, muskox, pigs and guinea pigs.



99



100



101



102



104



105



103



106



107



108

Grooming is probably the biologically most important social behavior. It plays a particularly important role in cattle herds, monkey troops and groups of apes. Here, grooming serves as a kind of social glue; it keeps individuals together and promotes social harmony. Members of stable communities develop mutual grooming preferences that last for many years, perhaps even for a lifetime. These affectionate relationships are not dependent on kinship, and therefore are comparable with friendships among humans.³⁻⁵



109



110





112

It's very relaxing to be groomed!



113



Mammals give the impression that they like to be groomed (photos 95-119); individuals may close their eyes as if they are in deep relaxation (114 and 117), or they stretch the groomed body parts, thereby encouraging the companion to continue grooming (photos 115 and 118). Often a grooming session is initiated by an invitation gesture (photo 116).

In nonhuman primates it has been shown that being groomed reduces tension, as reflected in a decrease in displacement activities^{6,7} and a lowering of the heart rate.^{8,9} Subjects engage in social grooming, particularly in situations of potential social conflicts, for example, at pre-feeding time and during crowded conditions. Grooming helps them buffer social tension, thereby reducing the risk of aggressive conflict.¹⁰⁻¹²

114



115



116



117



118



119



The friendly intention of grooming is understood by individuals of different species who may contrast in their species-typical behavioral repertoire, such as horses and cats (photo 120), cats and dogs (photos 121 and 122), dogs and horses (photo 123), humans and cats (photo 125), humans and horses (photo 124), monkeys and dogs (photo 126), and monkeys and humans (photo 127).



121



123



122



124



125



126



127

The urge to groom somebody seems to be particularly strong in primates.

65



128

In general, nonhuman mammals like to be groomed by humans if they can trust them (photos 128-131). Even when living in their natural habitat, they show quite clearly that they enjoy being groomed by a person they can trust (photo 130).



129



130



It has been demonstrated in horses, dogs and nonhuman primates that individuals experience a decrease in heart rate when a friendly person grooms them.¹³⁻¹⁵ Such an affectionate interaction has a calming effect also on the human subject (photo 131), who may experience a stress reducing effect, as reflected in decreased blood pressure.¹⁶⁻¹⁹

131





Hugging is an affectionate social interaction that is not unique to primates.



*I am so glad to have
found you!*



136

Hugging has a strong reassuring effect for individuals who are facing a distressing situation, such as the loss of one's mother (photo 136), the loss of a loved one (photos 137 and 139), or imprisonment in a barren environment (photo 138).



72

137



138



139

73



A stuffed toy animal or a favored blanket can serve as a hugging partner substitute.



141



142

Individuals who are lonely or depressed try to derive some comfort by hugging themselves.

Hugging and dancing are closely related behavior patterns.



143



144



145



146



147

Mouth-to-mouth greeting

(photos 147 and 151-158) is a ritualized feeding of pre-chewed food to the infant, who touches the mother's lip corner, (photo 145) thereby inducing her to offer food (photos 146, 148 and 149). Mouth-feeding of infants is practiced by numerous species, including humans^{20, 21} (photo 148).



148



149



150



151



152



153



154

Mouth-to-mouth greeting

is a very common social behavior:

One partner—usually a subordinate animal—approaches submissively and gently touches the area around the corner of the lips of another partner.



155



156

Dogs who mouth-to-mouth greet other dogs (photo 157)—or humans (photo 158)—not only touch, but often also lick the corner of the lip of the greeted partner. This gesture expresses submission and affection at the same time.



157



158



159



160



80

In monkeys, apes and humans, mouth-to-mouth greeting has developed into kissing.

161

Kissing not only has a bonding effect, but it also fosters social harmony.

It has been shown in chimpanzees that group members kiss each other particularly often in situations of potential conflict in order to mitigate social tension and forestall aggression.²²



162



163



164

Play-fighting probably occurs in all social animals. It allows partners to develop species-typical fighting techniques and test each other's physical strength, thereby establishing dominance-subordination relationships without hostility.



165



167



166



168



169

Play-fighting is a friendly social interaction; it occurs only in partners who get along well with each other.

Depending on the species, typical invitation gestures (photos 170 and 173) and play faces (photos 165-171 and 174) serve as unequivocal signals of non-aggressive intentions. They allow playmates to engage in vigorous mock fighting and wrestling without risk of intentionally injuring each other. They are also an assurance for young animals that play-fighting with big adult partners is not serious business (photos 74-76, pages 41-43).



170



171



172



173



174



175

A play-fight, unlike a serious fight, is initiated by both partners (photos 170 and 171, 173 and 174).



176

177



84

178



179

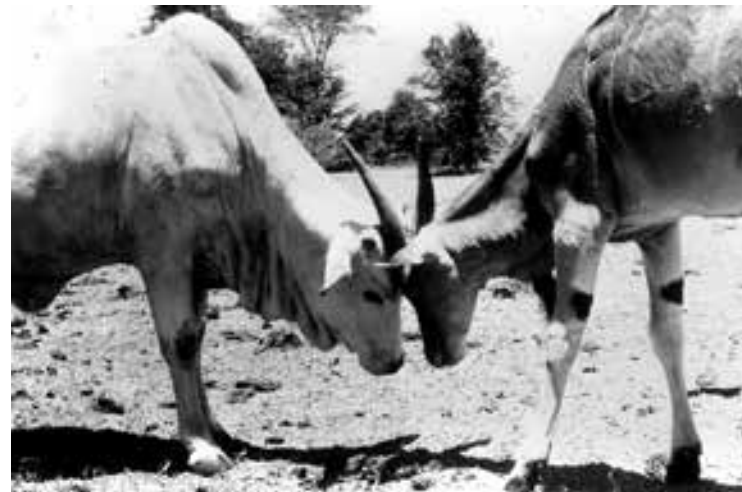
The subtle expressions of play motivation can be correctly interpreted by partners of different sizes (photo 76 on page 43 and photo 179) and members of different species (photos 180 and 181).

The rhesus macaque in photo 180 touches the author and laughs. The author understands these two gestures as signs of friendliness and laughs in return to confirm the playfulness of this interaction.

The young eland bull in photo 181 (right animal) approached the young zebu bull (left animal) with lowered and tilted head. The zebu bull understood the playful intention, and both animals started to push each other back and forth without hurting or intimidating each other.



180



181

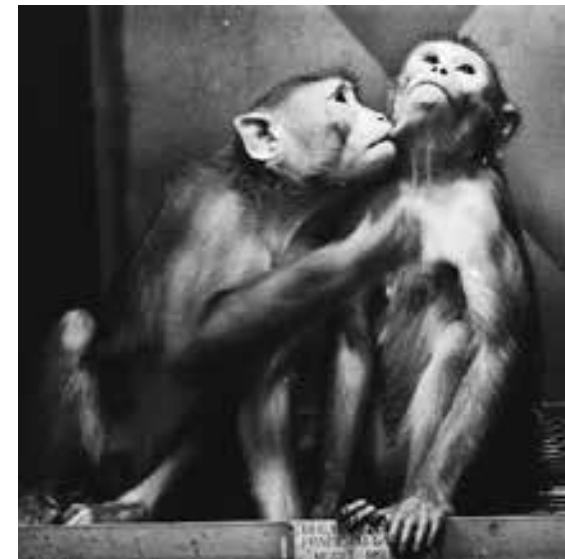


182

Playful biting

is typically shown by young individuals in the context of play.

The active partner gently bites or nibbles the cheeks, ears or other parts of the passive partner. As with play-fighting, only partners who get along well with each other engage in playful biting.



183



184



185



187



186



It looks like serious biting, but its intention is friendly, if not even affectionate.



The friendly intention of playful biting becomes particularly evident in adult humans, where the “bitten” partner usually laughs.

189



190

APPEASING BEHAVIOR

*Appeasing Behavior
mitigates aggressive
motivation in social
partners.*



191

Lip-smacking seems to occur only in primates.

The lips are puckered and slightly opened and closed in frequent succession with a soft smacking sound; the eyes are usually focused on a social partner. This facial expression is friendly and, in humans, typically comes along with a smile or a head-tilt (photo 195).



192



193



195



194



196

91



Fearful grinning is an unequivocal sign that one partner respects the dominant status of the other.

While focusing the gaze on the dominant partner, the corners of the lips are retracted and the teeth exposed (photo 197). In contrast to friendly grinning, the facial expression during fearful grinning is tense. Depending on the immediacy of fear, the mouth is opened only slightly or broadly (photos 198-200). At high intensity, the motivation of fear gets overlaid by aggressive motivation, and the grinning turns into a quasi-open-mouth threat (photo 201). Fearful grinning can be observed in canines, foals, and nonhuman and human primates.

197



198



199



200



201

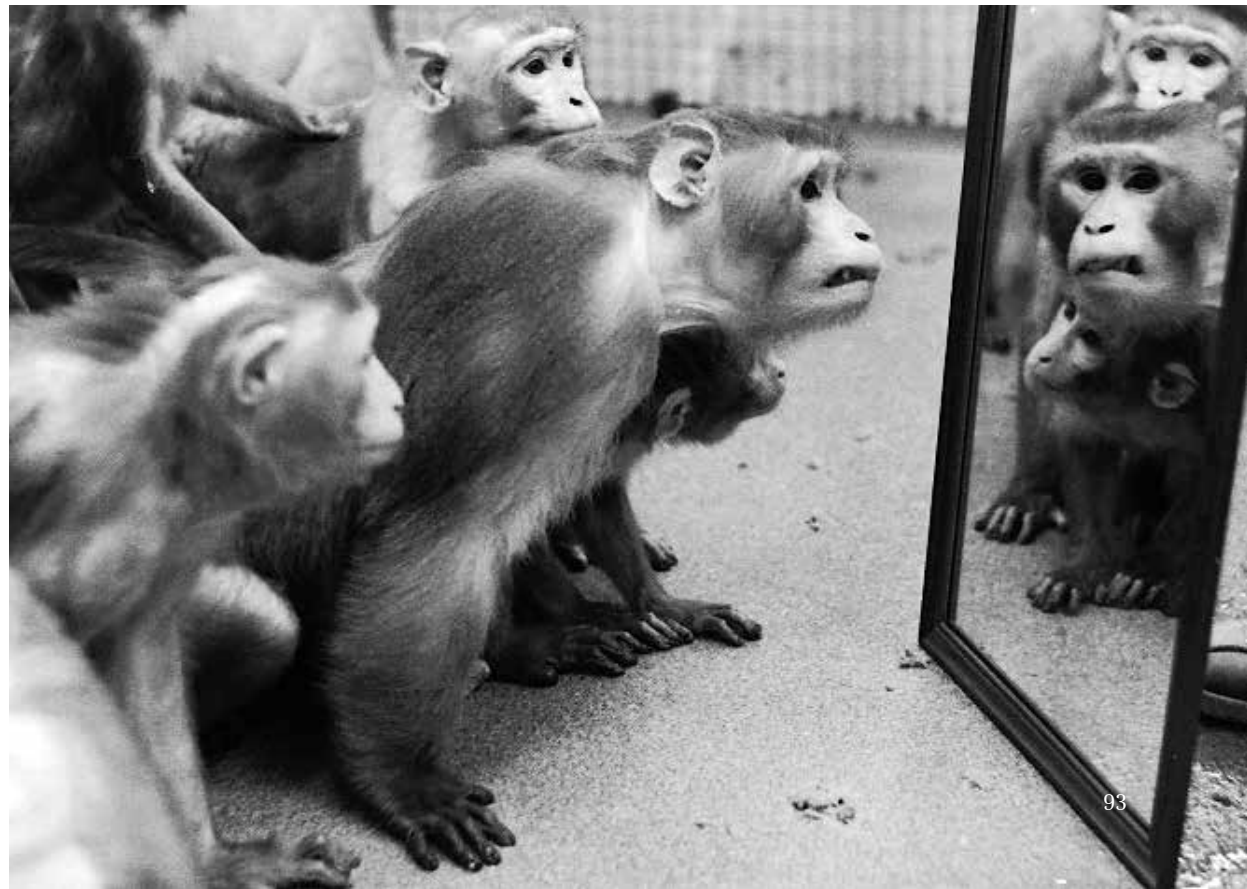


202



203

In humans, fearful grinning is often accompanied by the shedding of tears (photos 202 and 206).



204

93



205

Normally, fearful grinning averts aggressive action, but elicits comforting gestures, such as touching (photo 205) and hugging (photo 206).



206



207



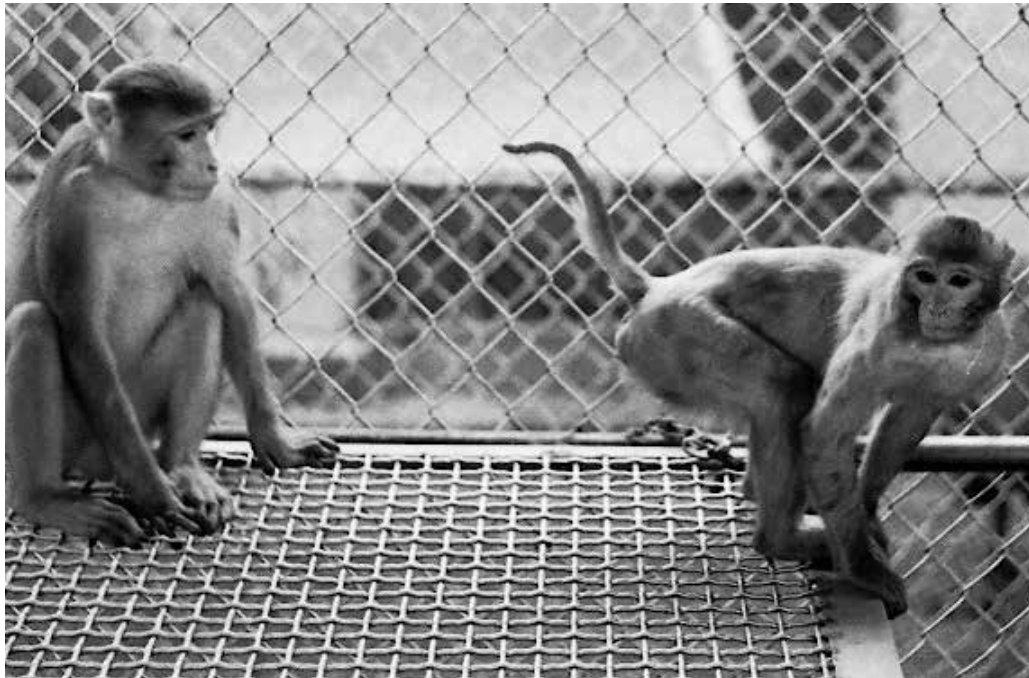
208

The rhesus macaque mother in photo 208 is fearfully looking at the approaching big male; she grins appeasingly and is therefore allowed to remain seated.



Presenting occurs in humans, dogs, monkeys and apes: The hindquarters are “presented” and the head turned in the direction of the target partner, who either ignores the demonstration, looks with interest (photo 211), or inspects the presented anogenital area (photos 210 and 212).





211

Presenting is probably a ritualized sexual invitation aimed at appeasing a potentially aggressive male. This assumption is supported by the fact that in nonhuman primates the presenting gesture is shown not only by females but also by males, and that it is often a prelude to grooming (photos 212 and 213); the macaques in photos 212 and 213 are both males.



212



213



214

Looking away

is perhaps the easiest way to interrupt a threat gesture. Monkeys and humans apply this strategy in daily life to avoid overt aggression.



215

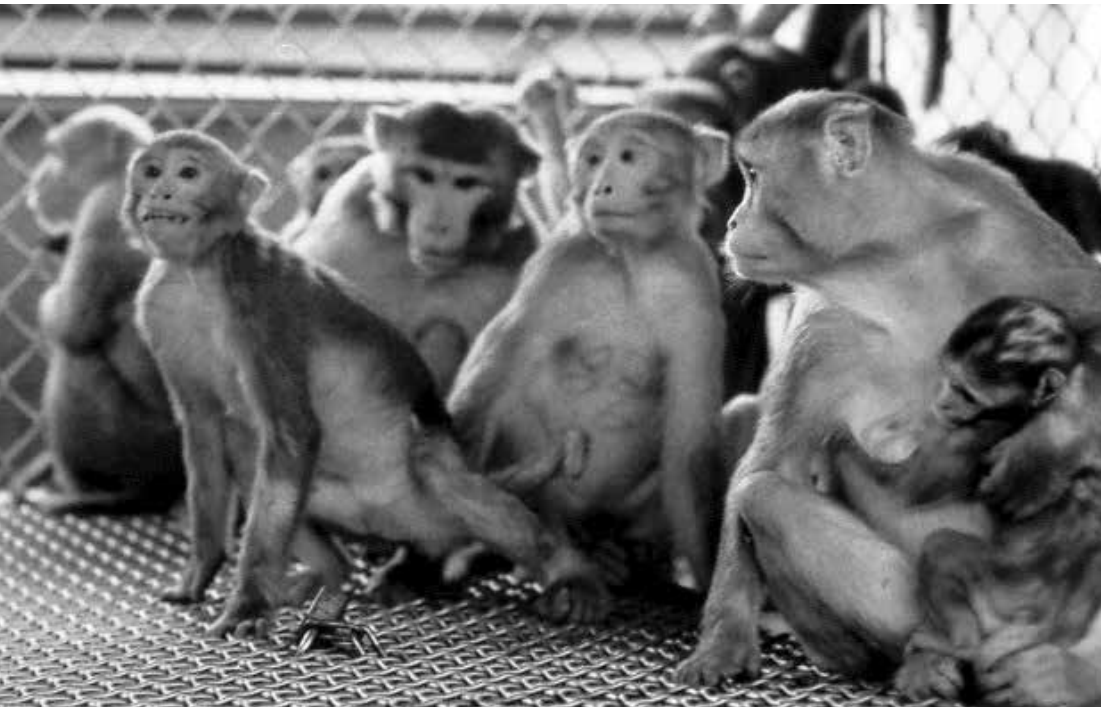


216

It is not uncommon that antelopes who fight, unexpectedly interrupt the sparring and look away from each other. This perhaps intentional diversion of attention often brings the conflict to an end.



217



218

Withdrawing

and turning away from a potentially aggressive partner is a commonly used strategy. It reduces the imminent risk of being physically attacked.



219



220



221



222

Surrendering is characterized in all mammals by making oneself small in front of a “big,” dominant opponent, who has the power of inflicting pain.



223



224

Surrendering is probably the most effective strategy of appeasement and conflict resolution.



225



226

The dog on the left in photo 226 submissively surrenders, thereby inhibiting overt aggression in the dominant opponent.

The surrendering macaque in photo 227 was bullied by two group members. The victim fled to the highest ranking female and submissively crouched in front her. The alpha female protectively places her hands on the victim, which keeps the two harassing females at bay.²³



227



228

Photo 228 was taken in a classroom where the students greet their teacher by submissively bowing down. Photos 229 and 230 show devotees submissively prostrating themselves before different institutionalized spiritual powers.



229



230



231



232

Infantile characteristics

have an aggression buffering effect.

Adult males of various primate species can sometimes be seen guarding, holding, carrying and playing with infants without doing harm to them. This suggests that infantile characteristics protect the kids from male aggression. The grown-up mandrill in photo 231 allows the little infant to investigate his fur. He clearly signals his non-aggressive mood by playfully laughing in a similar manner to the man in photo 232, who lets the infant pull his nose, and the male lion in photo 233, who allows the cub to tease him.



233



235



234

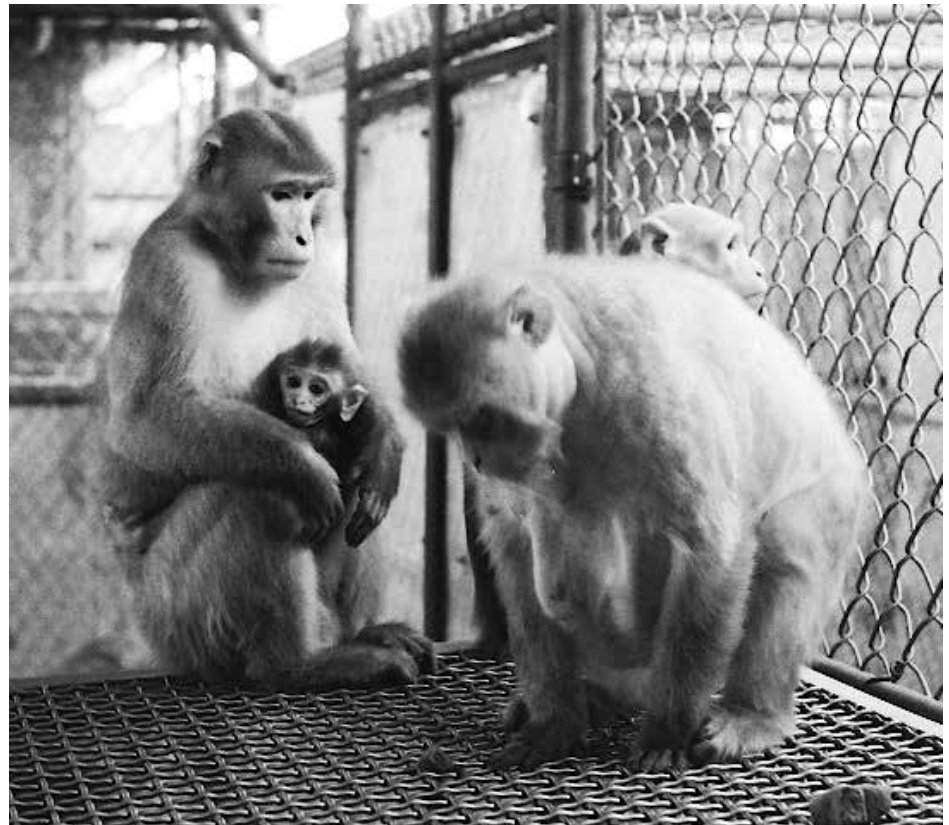


236

This adult male rhesus macaque was visited by an infant (photo 236). A bit consternate, he picked up the kid gently and walked to the other side of the pen, where he sat down right next to the infant's mother (photos 237 and 238).



237



238



239



240

The aggression buffering effect of infants has been documented for macaques,²⁴⁻²⁷ baboons²⁸⁻³⁰ and chimpanzees.³¹

Also, in psychologically healthy humans, infants inhibit adult male aggression.^{21, 32} In war zones, soldiers can be merciless with adults, but they usually take care not to harm or kill infants (photo 240).

SOCIALLY NEGATIVE BEHAVIORS

Socially Negative Behaviors aim to increase the spatial distance between individuals or keep individuals spatially apart.



INTIMIDATING BEHAVIOR

*Intimidating Behavior
attempts to instill subtle
fear (e.g., respect) or gross
fear (e.g., fear of being
attacked) in others.*





243

Impressing is the antithesis of surrendering: Everything possible is done to give the impression of being big.

Lifting and rotating the arms slightly outward is a trick that is employed both by nonhuman and human primates to appear bigger, more “impressive.”



244



245

Threatening expresses a readiness to aggression; it manifests as staring and displaying of weapons.

During highly aggressive motivation, the muscles at the base of the hair follicles that pull the hair upright contract (piloerection). This physiological response is universal in mammals. It makes the body look bigger in chimpanzees (photo 242), macaques (photo 245), cats (photo 246), badgers (photo 247), dogs, bears and many other species with furry coats. This tactic has little impressive effect in humans, because they don't have enough hair (photos 243 and 244).



246



247



248

Since piloerection does not visibly increase their bodily appearance, humans—especially males—developed alternative strategies to impress others. They associate with special objects, such as big cars (photo 248), killed animals (so-called trophies; photo 249) and big mansions that they claim as their property. They also have high structures associated with their persona displayed for public admiration (photo 251). Note that the people in photo 251 not only stand, but also submissively bow before their political leader's monument.



249



250

Religious institutions often impress their followers by having them build huge temples for worshipping. Mosques and churches very often are the highest, most dominating structures in human communities (photo 250).



251



Staring is an intense, yet relatively inconsequential threat (photo 252); it is often associated with intimidating gestures, such as impressing (photo 244, page 114).

Probably all social animals use staring as a threat gesture: The opponent is quasi-pierced with the eyes (photos 252-254). Staring serves as an unmistakable warning to either stay away or leave.



253



254



255



256

As a warning signal, staring helps to neutralize social tension. If the opponent shows an appropriate response, such as looking away or moving away, no overt aggression will follow.



257



258



259

Monkeys and people often accentuate the intensity of a stare-threat by opening the mouth.



260



262

Displaying weapons is a warning of earnest readiness to attack.

This gesture is always accentuated by staring. Different species have different social weapons, such as fists (photos 260 and 262), horns (photo 263) and teeth (photos 261 and 264), but their principal usage is the same: avoiding potentially injurious aggression.



261

Usually, the threatened opponent withdraws or submits and no fighting ensues (photo 263). Only in exceptional cases will the threatened opponent stand his or her ground; overt conflict then becomes unavoidable.



263



264



Human babies instinctively know how to threaten by displaying their weapons. Nonhuman infants develop this skill only later, when they establish their rank status among adults.



266



267



268



269

Abusing another individual by misusing one's social dominance status is a phenomenon that humans share with nonhuman primates, dogs and probably many other species.

The dominant partner not only intimidates, but also humiliates, for example by sitting on the subordinate partner's body (photos 269 and 270), pulling hair of the subordinate (photos 274 and 275), beating the subordinate (photo 276), or stealing food directly from the subordinate partner's mouth (photos 271-273).



270



271



272



273



274



275



276

AGGRESSION

Aggression is a physical attack that aims to reaffirm dominance or gain dominance over an opponent. Unlike intimidation, aggression always bears a risk of injury resulting from the victim's self-defense. Therefore, individuals usually resort to aggression only after intimidation attempts have failed to avoid an overt conflict.



278



279



280

Humans are a particularly aggressive species that has turned play-fighting into overt antagonism. Individuals are protected with specific garments in order to not injure one another, but the interaction is “deadly” serious: The typical play face (laughing) is now replaced by a tense, distorted combat face that signals “I want to hit you!” rather than “I want to play with you!”



281

129



Humans have developed sophisticated weapons that make intimidation attempts superfluous; the opponent does not even have to be seen in order to be attacked. Independent of dominance, the adversary can now be offended, injured and killed without undue risk. The worldwide use of these weapons has turned humans into monsters who, though they share most of their behaviors with nonhuman mammals, exhibit uncontrolled aggression that sets them apart from any other species.

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