

The Social Cat

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Our obligation is to understand what constitutes a rich life by understanding the emotional and social needs of cats. Cats form affiliative relationships with certain other cats in an environment where there are adequate resources for social groups to form. These strong relationships produce a complex society in which alliances and antipathies can affect access to resources. At its core the colony is matrilineal. The social colony began as humans were developing agriculture. Concentrated food resources could be effectively defended by multiple cats. In this context, the mother-offspring relationship continued past the weaning period resulting in the queen and her offspring defending this valuable resource. Today, colony size is determined by the amount of available food.

Behaviors among colonies

Cats recognize colony members v. non colony members. Aggression is exhibited by most or all colony members toward unfamiliar cats. Non-group members are not allowed to casually approach and enter the group. If non-colony members continue to attempt to join, they may be eventually allowed to enter the group. Many interactions are required as a gradual integration ensues.

There are cats who are found close together more frequently than other members of the group. Within the group, a number of affiliative behaviors are exhibited, especially between cats that are preferred associates. They do not only come together around resources but come together as a reflection of their social bond. Nose touch is an example of social greeting seen with preferred associates.

Allogrooming is a behavior in which one cat grooms another, usually on head and neck. The recipient is typically highly cooperative tilting and rotating her head to provide access to the groomer. A cat may solicit allogrooming by approaching another cat and exposing the dorsal surface of his head. Allorubbing also occurs among preferred associates usually involving head, sides and tail. It is usually preceded by approach with tail up, held vertically. This intense contact facilitates exchange of scent and seems to elicit pleasure responses as many cats will purr. The high rate of sniffing with allorubbing suggests the creation of a “colony odor.” Friendly cats will also entwine tails and rub tails against each other’s body. Lying together in physical contact is another example of social bonding.

Behavior: Queens and kittens

Females aid each other during kitten rearing, even those that are not related. They may engage in reciprocal altruism, in which one animal aids another with the expectation that the aid will be returned in kind. When queens give birth only a short time apart, the conditions for reciprocal altruism are easily met. Queens have also been observed to engage in midwifing behavior, cleaning the parturient queen and the kittens and consume the amniotic membrane. Queens engaging in cooperative rearing will groom, nurse and guard other kittens. When moved, kittens raised cooperatively will spend less time alone reducing the risk of predation. Kittens reared from communal nests leave the nest about 10 days earlier suggesting that rearing by multiple queens facilitates development.

Queens begin bringing her kittens prey at about four weeks of age, at first dead, then live prey. She will release the live prey in the nest, providing the kittens with an opportunity to learn hunting and killing skills. At the beginning she will demonstrate the skills as cats are excellent observational learners.

This rapid learning of hunting skills is critical for survival as they are solitary hunters. The majority of the hunted diet is small rodents so sharing a kill is impractical as multiple small rodents a day are required to sustain a single cat.

As the queen is the first cat a kitten is exposed to, she is critical to learning social behavior. This social learning extends beyond kittenhood as cats whose mother is present engage in a higher rate of allogrooming. Kittens appear to look to their mother for information about how to interact with the world. They socialize more readily to humans, for example, if the mother is present and appears calm in the presence of humans.

Though toms are reputed to have no involvement in rearing kittens, intact toms have been observed defending kittens from invading toms and to groom and share food with kittens. Males have also been observed disrupting intense wrestling play or pull them apart if they engage in overt aggression. As adults, relatives are socially closer and typically exhibit more friendly relationships with family members.

Dominance

“If one individual consistently submits or gives way to another as a consequence of prior experience, this cat is considered subordinate, while the animal submitted is considered dominant.” (Crowell et al 2004) The submission does not have to be consistent for this to be the case, they just must submit more readily than would be expected by chance. When a group of animals live together in a social group, a set of subordinate-dominant relationships are formed. This is not a linear hierarchy. Ties and reversals are common. Ritualized signals are required to avoid overt fighting. Subtle behaviors include looking away, lowering the ears slightly, turning away or leaning back. In more intense encounters, the subordinate will flatten ears against the head, lower and curl tail lateral to rear leg, and crouch. Other encounters with dominant cats are avoided by giving way. The resources are divided up by time as well as space.

The major function of dominance is presumed to be priority access to preferred resources but it is not always the case that the dominant animal has first and greatest access to food, water, resting places and mates. Other variables are motivation to obtain the resource, coalitions of multiple subordinate animals or female choice in the case of mating. The dominant cat will approach a subordinate one, stare, stiffen limbs, stiffen ears erectly upright while rotating them so the opening is lateral and elevate the base of the tail, allowing the rest to droop.

Uncommonly, the dominant cat may mount the subordinate. A full display of dominance is rarely used as subtle, partial display is usually sufficient. This may be completely missed in a multi-cat household by humans attempting to understand relationships between cats.

Cats are unique individuals and groups of cats form unique products of the personalities within the group. Some cats may be high ranking and not make an issue of it unless there is a resource they want at the moment. Other high-ranking cats may routinely move through the group, threatening individuals or confiscating resources they may not even appear to desire at the moment. These “bully” cats may lead to serious behavior problems in the household. For example, a subordinate cat waits while a higher-ranking cat eats.

Sound and sight

Cats are one of the most vocal carnivore species. There are three major categories of vocalization. Sounds made with a closed mouth, the purr and trill, are meant to be friendly and greeting calls. Sounds made with the mouth open and gradually closing are varieties of miaows uttered in a variety of situations with other cats, dogs and humans. Sounds made with the mouth held open are the growl, yowl, snarl, hiss, spit and shriek, usually related to fear and aggression.

Olfactory communication occurs using a variety of sebaceous glands located throughout the body. The temporal glands located in the temporal region, the submental glands under chin and the circumoral glands around the lips are all rubbed against fellow colony members and objects in the environment. These are believed to be related to depositing scent within the core area to label it as such and depositing scent on a familiar conspecific with which there is an amicable relationship.

Urine marking is used to communicate specific information - “intact female” to communicate location “I entered here at this time” or communicating emotional information “I am here and quite aroused.” Ferals have been observed leaving feces uncovered in peripheral areas and covering them in core areas of home range. This doesn’t appear to be related to warning off strange cats.

Social skills, multi-cat household, fear

Social species are born with the capacity to learn social skills but need to experience them to learn. Individual cats adopted as kittens and raised in single cat homes may lack the knowledge to interact with their own species and may exhibit uninhibited aggression or excessive fear if an attempt is made to introduce another cat.

Colonies are fairly cohesive and display agonistic behavior towards non-colony members. This has important implications in the introduction of new cats into a household. Adopting 2 or three related cats may improve outcome. A stranger should be introduced using the concepts of slow acclimation demonstrated when colonies gradually accept new members. Normal inter-cat social interaction is transposed to humans manifested in rubbing, greeting behavior, shared grooming. An understanding of the relationship between household should lead to a provision of resources that mirrors the needs of the social groups present, the dominant and submissive cats and the individual relationships of the cats.

If lower cats are being bullied by a higher ranking one and it is recognized by the human’s personal space, hiding places and separation of the bully from some target resources may be necessary. In a situation which causes fear, a fearful cat will make many attempts to escape before reacting aggressively. If confinement prevents simple flight, complete immobility may be observed. Situations which cause fear must be avoided. No effort should be made to calm a fearful cat as redirected aggression may occur. Cats stay reactive to a situation which may provoke aggression for a prolonged period after the stimulus and can become more reactive if they are manipulated during this reactive period. In the veterinary setting it is important to diffuse fearful situations before they reach this level of arousal as it will be 30-40 minutes before a fearful cat can be handled.

Play-fighting and aggression

Theories of the purpose of play fighting indicate that they are practice for future needs, strength training for muscles, eye-muscle coordination and to learn moderation. As the kittens get older, the amount of play aggression increases and gets rougher leading to the dispersion of the litter. Owners are often targets for this type when other play targets are unavailable as seen by cat sneaking up, biting and running, or ambushing ankles. Play aggression is a normal social behavior so the behavior must be refocused onto inanimate objects or to include another cat in the social group.

Wild cats normally proportion a part of their energy to hunting. If hunting does not occur, the energy to hunt increases causing the amount of stimulus needed to cause the behavior to decrease. Then, slight movements or unusual targets (dog tails, humans walking) may trigger a predatory attack. The motion is all that is needed. These are also normal and need to be channeled to appropriate outlets.

One of the most common forms of aggression is redirected. The source intended is unavailable, as in seeing roaming cats out a window. The aggression will be directed toward an available target, seeking an owner, another cat or a dog nearby. Unfortunately, the association between the stressful event and the target may persist for a very long time, even if the victim had nothing to do with the stress. A reminder of the incident can stimulate repeated aggression just by seeing the victim. Long term separation from the target victim may be required for extinction of the reminder.

Maternal aggression is normal and is triggered by the distress cries of the kitten, and it diminishes as the kittens grow older. Territory may be more of a concern for some cats than social interaction and manifest as an attack on a guest where guests in the home are rare or toward another cat introduced into a home. Separation in a highly territorial cat before guests arrive is key. The older the cat the less agreeable he will generally be to the introduction of another cat. Slow integration in the house, starting with physical separation is critical to acceptance. Tolerance should be the goal rather than “friendship.”

Kittens are very social. About age 6-10 months they undergo a dramatic change in personality. Play fighting becomes more aggressive and prolonged leading to dispersion of the litter. In a home, this aggression can be transferred to humans who experience a shocking change in their cat. Redirecting to appropriate play is key to reducing the negative encounters.

Irritable aggression will manifest as “out of character behavior” caused by a medical condition, especially one causing pain or discomfort, including hypertension and hyperthyroidism. Learned aggression results from reinforcement of behavior that the cat experiences and learns. A cat who expects food treats who is suddenly put on a diet may react aggressively and when the owner resumes the food treats and learns that aggression is helpful to meeting her desires. The lowest ranking cat is the ‘pariah,’ who may exhibit submissive behavior toward a higher ranking cat. The desire to escape may be so strong that, if thwarted, the pariah will attack out of overwhelming fear. Hiding places, reinforcing desirable behavior, and backing away can help.

Environmental enrichment

By not recognizing the emotional needs of cats, many behavior problems and owner dissatisfaction with their pets are born. Owners’ failure to comprehend their cat’s true demands of life and their false expectation of him to be able to fulfill human demands lies at the heart of many behavior problems.

The numbers of companion cats are rising. Much of it in the most busy and crowded areas, cities, and where many owners live in hi-rise apartments. Cats kept indoors may be safer from many perils like automobiles, communicable disease, injuries, infections from fighting and common parasites. The depth of an owner’s attachment can result in the owner expecting the cat to stay at home. But mental welfare may be at stake. They are designed to detect prey, stalk and catch it using highly evolved sensory capabilities. Cats NEED to have their senses stimulated and have the opportunity to organize hunting behaviors. The social contact developed from infancy is also necessary. The opportunity to explore new things in changing environments and fulfill the desire can play a factor in if they will be sociable or to be highly territorial and even defend resources are part of a cat’s fundamental psychological needs.

The presence of a challenge to be overcome is just as vital as contentment, mood homeostasis and well-being. If there are no problems to resolve in terms of play, acquiring food or access to novelty it can cause boredom, obsessive behaviors, laziness, obesity and excessive sleep. Life indoors with unchanging toys and an environment that never changes cannot be compensated for by attention or petting. Our obligation is to increase public awareness of the emotional needs of cats and to compensate from the start for a lack of opportunity to express normal behaviors WE must promote the activities that innately rewarding predatory sequencing of “eye-stalk-chase-pounce-bite” Hunting games requiring short bursts of chase many times a day mimics the inefficient hunting of a cat who may only succeed in catching a prey a fraction of the times attempted. Social contact is critical as well. Cats should be able to dictate the relationships they have and we should be responsive to them. Most indoor cats should not live without another cat. New objects and opportunities to investigate will provide excitement and novelty. Food should not be easy to obtain by merely sauntering up to the food bowl. Food puzzles, hidden small portions and other foraging opportunities should be supplied. These efforts will reduce the undesirable behaviors owners describe as they embrace the unique emotional needs of their companions.

For an environmental intervention to be “enriching,” the changes it produces must be linked to an improvement in welfare which may or may not be observable as a change in behavior. The use of measures known to be linked to welfare, including cognitive and physiological indicators will aid in identification of interventions that improve welfare.

Interspecific strategies usually involve humans. Early socialization to humans will greatly influence how a cat perceives humans and therefore how beneficial human-cat interactions are. Consistency of handling are important, resulting in less fearful and more relaxed cats. Understanding the ways and areas where a cat may prefer to be petted, for example, can reduce improve the experience. Enrichment potential exists between dogs and cats if early (less than one year) socialization occurs. Appropriate play is critical in early socialization as injuries to human hands and feet can be serious if predatory toys are thought to be the extremities.

Cats rapidly habituate to objects so that regular rotation of toys in play sessions increases success. Toys that trigger behaviors similar to the hunting sequence are preferred. Satisfying the final kill behavior is important. Natural feeding behaviors are not encouraged by food left out in bowls. Locating, capturing and killing behaviors may contribute to behavioral diversity and to prevention of abnormal behaviors often observed in captive wild felines. This also alters the energy budget required for eating, encouraging obesity. Alternatives such as food puzzles, hiding food in multiple locations and feeding small amounts at short regular intervals have been proposed. Physical welfare improvements have been scientifically proven but the psychological and behavioral benefits are, as yet, anecdotal.

Adequate space to accommodate the resource needs of cats to sleep, feed, eliminate can be challenging in small homes. Cats seem to prefer a constant floor temperature, and soft flooring. A normal behavioral repertoire includes climbing and jumping, secure places from which a cat can observe his world from a safe vantage point. A place to retreat at different heights can be satisfying. Adaptation to novel environments can be assisted by a place to hide.

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