

The Lion King v. Reality

Children's films often have scenes that allude to the outside, real world. *The Lion King* does just that, referencing to concepts involving survival, cooperation and their evolution of sex. Disney released this film in 1994. It's actually the highest grossing 2D animated film of all time in the U.S. Main characters include Mufasa, Simba, Scar, and Nala. Mufasa is the father of Simba who is king of the land during the beginning of the movie. Scar is Mufasa's brother, who *would* have been king if it weren't for the birth of Simba. Nala is Simba's best friend and later mate. The film revolves around the struggle for power between characters (mainly Scar trying to become the alpha male) and discretely narrates how lions go about their life. The main concepts the film attempts to illustrate involve infanticide, communal care and male vs male conflict.

Scar, the malevolent uncle, makes several attempts to kill his own nephew, Simba, whether it be for jealousy, anger or dominance. This can be referencing a realistic concept of most carnivores known as infanticide. Infanticide, the killing of an infant, can be dated all the way back to prehistoric times. It is clearly defined as "any behavior that directly induces infant mortality [1]". Infanticide includes, but isn't limited to, direct violence, deliberate abandonment of the infant and harassment of the mother so that she is no longer able to care for her infant. In the first situation, as seen in Appendix [A], Scar tricks Simba into going to the forbidden land where the hyenas live, obviously trying to get him killed. He fails, of course, because Mufasa (his father) saves him. His second attempt, as seen in Appendix [B], is when Scar tricks Simba into staying in his place in order for him to receive a 'surprise' from his father. What Scar *really* was doing was setting him up for his death; he organized a stampede in Simba's direction.

This infanticide is most prevalent in lion species, like the African lion in the Serengeti and Tanzania. These lions kill infants for dominance in a new land, to ensure that the cubs of a pride are his and sometimes males even “eat the viscera of [1]” cubs. There’s also evidence that infanticide “occurs almost every time a new coalition of males [1]” are ready to take over a pride. It has been studied that about 89.5% of cubs actually do get killed before they reach six months of age as seen by studies, Appendix [C]. Biologists tag and keep track of infants in order to retrieve this data. Infanticide will probably continue to happen as long as these male take-overs continue, too. It has become a “regular feature [1]” in male lions and, in turn, a reproductive strategy seeing as the females have no choice but to mate with the infanticidal males after they have killed off the foreign cubs. In the long run, infanticide leads to the survival of these infanticidal males’ children because they “will not have competition from half-siblings [2]” which has been recorded to hinder their survival chances.

The Lion King has several scenes showing how the lionesses of the pride work together and form a sort of sisterhood with each other, also shown in their communal nursing. For example, as seen in Appendix [D], Nala’s mother takes part in bathing Simba who, evidently, is not hers but she continues to bathe him knowing this. This is called non-offspring nursing or mutual parenting and lionesses do this by creating crèches which are “public nurser[ies] for infants of working [4]” females and participate in “shared lactation [4]”. These working females are usually in charge of hunting and gather the food, usually done in groups.

Communal living and parenting is a key aspect when regarding ‘real’ lions. In the wild, female lions “band together in groups of six to 10 [3]” in order to form prides. This

formation of prides helps lionesses “be better mothers [3]” as concluded by authors Packer and Pusey. This group-raising technique not only betters the mothers but also helps “to defend against infanticidal males [4]” and thus results in “more cubs surviving into adulthood [3]”.

Grouping by lionesses also gives them an advantage in size seeing as, on average, an individual female is about half the size of a lone male. But, together the females both outnumber the singular male in quantity and now in size (as a whole). It has also been concluded that their group rearing and non-offspring nursing is “a by-product of the females’ communal defense of their cubs [5]” from infanticidal males. Studies show that non-offspring nursing “causes there to be an increase in the production of milk [5]” and then results in even more non-offspring nursing which then results in a higher number of healthy, surviving cubs. Studies also show that lionesses will most likely take part in non-offspring nursing “when costs were lowest [5]” and when the cubs were closest of kin. Their defense mechanism probably started as an adaptation more and more as lionesses began seeing how much higher of a chance their cubs have to survive if they continued these actions and thus resulted in an evolved behavior that still exists today in prides. If *The Lion King* were to have been just a bit more realistic, I suppose they would have made it clear as to whether Nala was closely related to Simba which would then enforce communal rearing in reality.

The male vs male competition between Mufasa and Scar is unrealistically portrayed. As seen in Appendix [E], Scar attempts to kill Mufasa several times in order to gain his power. But in actual lion communities, the males don’t usually rival against one another. Instead, they come together to form “lifelong alliances...to maximize their own chances [3]”

for survival and reproduction and are constantly part of a community-like system. These alliances are most prominent while “ousting invaders [3]” and other situations that present large threats to their common interest as a whole. A male’s reproductive success actually relies on how well “the coalition can withstand challenges from the outside [3]”. At night, the lions protect their territory with their roars and will pounce instantly on any foreign invader. Studies have even been done to test this by putting tape recorders on a lion’s territory, and playing a strange male lion’s roar. The male’s response would be immediate. There have also been tests where these same tape recordings are put next to a stuffed lion and the *real* lions that responded would attack quickly, as seen in Appendix [F]. That’s just how defensive they are. In the film, the producer makes it seem like the point of a male lion is to take singular command. Either Mufasa is the ‘king’ or Simba is next in line to *become* king or Scar is jealous that he’s *not* king so he must kill both Mufasa and Simba. Realistically, this is not what happens. Lions, as a species, work in groups. They live and reproduce in groups and are a very generous breed.

All of a lion’s techniques seem to lead to both their survival and reproductive success, specifically involving their communal caring, grouped hunting and even infanticide. As for how accurately *The Lion King* seems to show these concepts, one must keep in mind that it is, in the end, only going to be a children’s Disney movie. If it were to alter a bit to fit these evolutionary strategies, though, the film would have to take a closer look at how males interact because quarreling for power isn’t too much of an interest for lions. They, instead, will group together and mostly take action keeping the community (not themselves) in mind. With these changes made...yes, the film would have been more

realistically related to a true lion's livelihood but its plot might not have been prominent or even sensible, not to mention appealing to children.

Still today scientists are trying to figure out why lions are 'the exception'. If their techniques of survival were applied to any other species, that species would most likely die out because the cost of grouping and generosity among the species would be greater than the survivability of new offspring. Only to lions does this "self-interest seem to apply [3]". Their complexity of communal standards is definitely something that needs to be further investigated in order to find out why lions are so special that their togetherness technique only works for them, and works proficiently at that. Perhaps more "tape recorders, stuffed decoys [3]" and tricks would allow us to accurately personify them and gain knowledge that has yet to be acquired. Maybe with our technological advances we can manipulate certain situations with lions to help us predict their thought process through fake, yet animated, stuffed animals. How great would it be to create your very own pride from robotic lions and watch them interact with the Serengeti lions.

Appendix

[A] film time 12:58



[B] film time 30:44



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Table I. Mortality of lion cubs^a

	Fathers replaced in first 4 months (%) ^b	Fathers remain in pride for first 6 months (%) ^c
All cubs in litter die be- fore 6 months of age	89.5	40.8
At least one cub in litter survives to 6 months of age	10.5	59.2

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[F] source [3]



Works Cited

- [1] Hausfater, Glenn, and Sarah Blaffer Hrdy. *Infanticide: Comparative and Evolutionary Perspectives*. New York: Aldine Pub., 1984. Print.
- [2] Bertram, Brian. *Lions*. Stillwater, MN: Voyageur, 1998. Print.
- [3] Packer, Craig, and Anne Pusey. "Divided We Fall: Cooperation Among Lions." *Scientific American* (1997): 32-39. Web. 1 May 2011.
<http://www.cbs.umn.edu/eeb/lionresearch/publications/articles/Divided_we_fall.pdf>
- [4] Roughgarden, Joan. *Evolution's Rainbow: Diversity, Gender, and Sexuality in Nature and People*. Berkeley: University of California, 2004. Print.
- [5] Pusey, Anne E., and Craig Packer. "Non-offspring Nursing in Social Carnivores: Minimizing the Costs." *Behavioral Ecology* 5.4 (1994): 362-74. Print.



End of the day

The end of the day is a time of rest and reflection for the lion pride. As the sun sets, the lions gather together, their silhouettes against the orange and yellow sky. The pride leader, a majestic lion, stands on a rock, looking out over the savanna. The other lions, including the lionesses and cubs, are scattered around, some resting on the ground, others standing and looking in different directions. The atmosphere is peaceful and serene, with the gentle hum of the savanna in the background.

