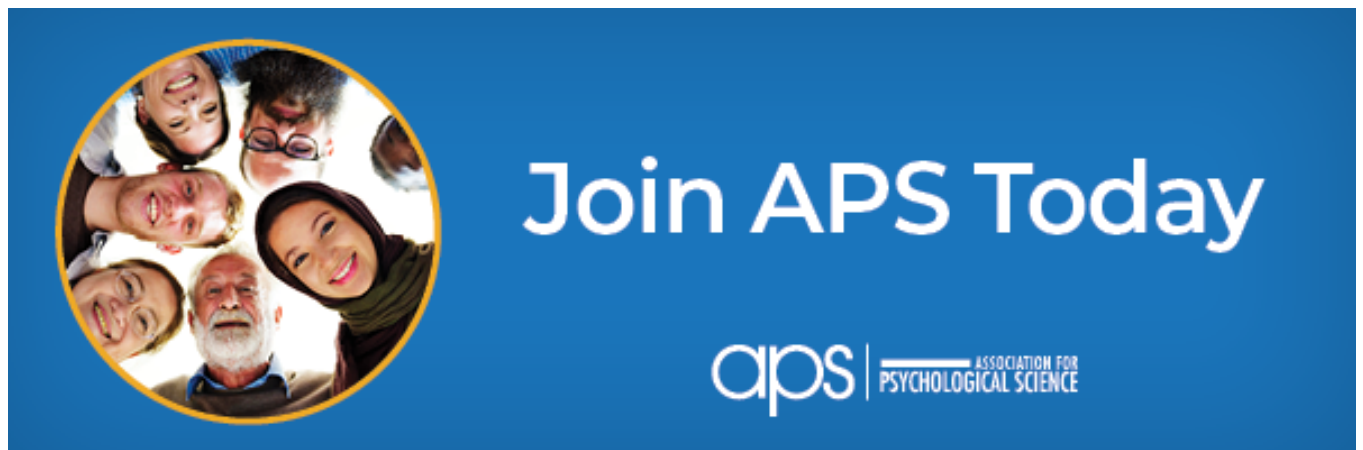


# Harlow's Classic Studies Revealed the Importance of Maternal Contact

June 20, 2018



Harry Harlow's empirical work with primates is now considered a "classic" in behavioral science, revolutionizing our understanding of the role that social relationships play in early development. In the 1950s and 60s, psychological research in the United States was dominated by behaviorists and psychoanalysts, who supported the view that babies became attached to their mothers because they provided food. Harlow and other social and cognitive psychologists argued that this perspective overlooked the importance of comfort, companionship, and love in promoting healthy development.

Using methods of isolation and maternal deprivation, Harlow showed the impact of contact comfort on primate development. Infant rhesus monkeys were taken away from their mothers and raised in a laboratory setting, with some infants placed in separate cages away from peers. In social isolation, the monkeys showed disturbed behavior, staring blankly, circling their cages, and engaging in self-mutilation. When the isolated infants were re-introduced to the group, they were unsure of how to

interact — many stayed separate from the group, and some even died after refusing to eat.

Even without complete isolation, the infant monkeys raised without mothers developed social deficits, showing reclusive tendencies and clinging to their cloth diapers. Harlow was interested in the infants' attachment to the cloth diapers, speculating that the soft material may simulate the comfort provided by a mother's touch. Based on this observation, Harlow designed his now-famous surrogate mother experiment.

In this study, Harlow took infant monkeys from their biological mothers and gave them two inanimate surrogate mothers: one was a simple construction of wire and wood, and the second was covered in foam rubber and soft terry cloth. The infants were assigned to one of two conditions. In the first, the wire mother had a milk bottle and the cloth mother did not; in the second, the cloth mother had the food while the wire mother had none.

In both conditions, Harlow found that the infant monkeys spent significantly more time with the terry cloth mother than they did with the wire mother. When only the wire mother had food, the babies came to the wire mother to feed and immediately returned to cling to the cloth surrogate.

Harlow's work showed that infants also turned to inanimate surrogate mothers for comfort when they were faced with new and scary situations. When placed in a novel environment with a surrogate mother, infant monkeys would explore the area, run back to the surrogate mother when startled, and then venture out to explore again. Without a surrogate mother, the infants were paralyzed with fear, huddled in a ball sucking their thumbs. If an alarming noise-making toy was placed in the cage, an infant with a surrogate mother present would explore and attack the toy; without a surrogate mother, the infant would cower in fear.

Together, these studies produced groundbreaking empirical evidence for the primacy of the parent-child attachment relationship and the importance of maternal touch in infant development. More than 70 years later, Harlow's discoveries continue to inform the scientific understanding of the fundamental building blocks of human behavior.

## References

- Harlow H. F., Dodsworth R. O., & Harlow M. K. (1965). Total social isolation in monkeys. *Proceedings of the National Academy of Sciences of the United States of America*. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC285801/pdf/pnas00159-0105.pdf>
- Suomi, S. J., & Leroy, H. A. (1982). In memoriam: Harry F. Harlow (1905–1981). *American Journal of Primatology*, 2, 319–342. [doi:10.1002/ajp.1350020402](https://doi.org/10.1002/ajp.1350020402)
- Tavris, C. A. (2014). Teaching contentious classics. *The Association for Psychological Science*. Retrieved from <https://www.psychologicalscience.org/observer/teaching-contentious-classics>