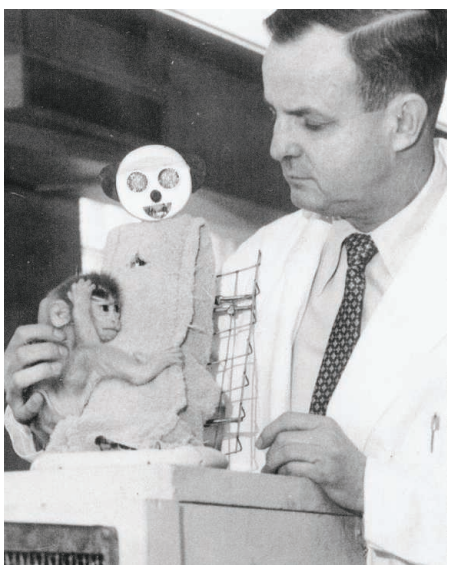
PSYCHOLOGY

Mother, Love

Ben Harris

In Steven Spielberg's 2001 film *A.I.: Artificial Intelligence*, a young couple adopts a robot child (David) that has the capacity for emotions as well as ratiocination. This requires his human mother to activate an "imprinting protocol" that binds David to her as if his love were hard-wired, with her as its focus. Thanks to his programming interacting with his mother's love, the robot child becomes emotionally connected and human.



Superior monkey mother? Harry Harlow with an infant rhesus monkey and a cloth surrogate mother.

To Marga Vicedo, the imprinting protocol of *A.I.* is a futuristic expression of a theory of human development that has become influential in psychology, related disciplines, and popular culture. The theory posits that a mother's love for her infant is instinctual. A corollary is that such love is essential to the child's development. More specifically, empathic, motherly love must be expressed during an early, critical period in an infant's life. If successful, the child's emotions will develop normally, creating a healthy adult personality. Without the proper maternal love, however, the infant will be stunted and become a dysfunctional individual.

As the terms "critical period" and "instinctual" suggest, this theory of attachment is modeled on Konrad Lorenz's ethological theory of animal behavior. Like the goslings that imprinted on Lorenz and followed him around, human babies are believed to develop an emotional attachment to their mothers if exposed to their love at the right moment. The creator and popularizer of modern attachment theory was British psychiatrist John Bowlby, who drew on Lorenz for scientific authority. Together they promoted a theory of human development and an analysis of family life and social organization in the post–World War II era.

The Nature and Nurture of Love
From Imprinting to Attachment in Cold War America

by Marga Vicedo
University of Chicago Press, Chicago, 2013. 331 pp. $45, £31.50. ISBN 9780226020556.

In *The Nature and Nurture of Love*, Vicedo shows how Bowlby and his allies biologized motherhood and made the bond between mother and infant the key to creating emotionally healthy adults and solid citizens. A historian of science at the University of Toronto, Vicedo accepts no component of attachment theory as empirically revealed, natural truth. Rather, she historicizes its various features, assumptions, and modes of expression. In doing so, she reveals their implicit beliefs and normative prescriptions. Mothers, the theory explains, should love their babies naturally—without qualification or hesitation. They must not work outside the home or use daycare. Bowlby warned that "[t]o deprive a small child of his mother's companionship is as bad as depriving him of vitamins."

Vicedo's history centers on the Cold War era, when social commentators and the public debated the effects of changing gender roles in post–World War II families. Scientists, in turn, studied the effects of family disruption: children living in orphanages or being separated from parents due to the war. To Bowlby and Lorenz, such research on attachment and separation would help safeguard family integrity, which they linked to social stability and the struggle against communism.

Initially, Bowlby's evidence came from psychoanalytic studies, known for their anecdotal methodology and small sample sizes. What made his theory convincing was its later incorporation of experimental studies of animals—revealing laws of development across species, including humans. Of the animal researchers, Harry Harlow was the most influential, a sober-looking professor in a lab coat who dared to study "the nature of love." In his primate laboratory at the University of Wisconsin, Harlow raised infant rhesus monkeys on surrogate mothers that dispensed milk and had bodies made of either wire mesh or terrycloth.

The result that most pleased the attachment theorists was the social and sexual immaturity of Harlow's surrogate-raised monkeys. More dramatically, females raised on surrogates were the worst possible mothers to their own infants. Clearly, Bowlby said, early contact with a real mother is necessary for emotional development. What Harlow actually showed, however, was that monkeys' contact with peers is the key to emotional development, with mother acting as a go-between. That discovery was, along with other anti-attachment findings, ignored by Bowlby and Lorenz.

As the reader learns, animal research was not the only discipline misrepresented by the radical instinctivists. Anna Freud, for example, complained that Bowlby excised the subjective, psychological essence of psychoanalysis in his fervor to biologize the infant-mother bond. In her chronicles of such disagreements between Bowlby and his critics, Vicedo's analysis of scientific evidence is thorough enough to be used in a course on research methodology.

As a historian of science, however, she is after bigger game. She asks how a scientific theory can endure when its evidence and logic are persuasively refuted by experts. Her answer is that Bowlby's attachment theory brought the authority of biology to the seemingly less rigorous field of developmental psychology. It also borrowed from enough scientific and social-scientific specialties to outflank critics who only knew one discipline. And compared to their opponents, Bowlby and Lorenz presented a united front that persisted for decades—while others moved to new research questions.

More than the story of a controversy in developmental psychology, *The Nature and Nurture of Love* is a compelling interrogation of a popular scientific theory, its creators, and its critics. Put on the witness stand, instinctual attachment theory does not acquit itself well.

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