Why Your Older Brother Didn't Share

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If you watch enough television, you'll witness what psychologists describe as birth order stereotypes. Take Alex P. Keaton of the 1980s U.S. sitcom *Family Ties*. Firstborn Alex was far more brash and competitive than his younger sisters, reading *The Wall Street Journal* while in high school, for example. Now scientists report that the stereotype is valid: eldest children are less cooperative, trusting, and reciprocating than their siblings.

Psychologists have been debating the importance of birth order since the days of Sigmund Freud. Those that argue that it plays a strong role in personality say, for instance, that middleborn children are more social than their youngest or oldest siblings because they get the least amount of attention from their parents and thus must make friends outside of their family. Psychologists base their findings on self-questionnaires and interviews with friends and family.

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Go-getter. The competitive, overachieving Alex P. Keaton (*far right*) embodied the firstborn child stereotype.

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Evolutionary biologist Alexandre Courtiol of the University of Montpellier 2 in France and colleagues wanted a more objective test. So they asked 510 unrelated college students to play a two-person investment game. The game worked like this: Both players started with €3. Player A, the investor, could send any amount of her money to player B, the banker, who would triple that money. Then player B could return any amount of his now larger pool of cash to player A. Because player B didn't have to send any money back, the amount player A sends to him is a measure of trust. And the sum player B returns to player A is therefore a measure of reciprocity.

The scientists randomly assigned each volunteer to play the role of player A or B and told them that they wouldn't meet their partner. To make sure the subjects weren't influenced by the random behavior of a real person, unbeknownst to them, they actually were playing fictitious opponents.

When the researchers grouped the game data by birth order, they found that firstborn player A's trusted less than laterborns, sending 25% less money to player B. Firstborn player B's also reciprocated less, returning between 22% and 29% fewer euros, the scientists report in the December issue of Animal Behavior. Birth order was a stronger factor than age, gender, income level, or religious belief--other possible variables that could influence cooperative behaviors.

So why are firstborns less cooperative? On possibility, the researchers say, is family dynamics. When new siblings arrive, they siphon off parental attention, and in response firstborns feel the need to compete more and cooperate less. The behavior of children without siblings fits that explanation: They behaved like middle and lastborns. "That suggests that what influences cooperative behavior isn't being born first ... but instead a child changes his behavior when another sibling arrives," Courtiol says. He cautions, however, that although birth order is a stronger influence than other factors studied, it explains less than 10% of the variation in subjects' game behavior.

Personality researcher Del Paulhus of the University of British Columbia, Vancouver, in Canada says that the findings make sense, but he offers an alternative interpretation. "All the strength and maturity is in [firstborns'] hands for a number of years," Paulhus says. "So they don't have to go out of their way to bargain or tradeoff with other siblings." And the finding that laterborns cooperate more jives with the theory that they are the bigger risk-takers, says evolutionary psychologist Frank Sulloway of the University of California, Berkeley. "Cooperation [as a strategy] often entails risks, because cooperation isn't always reciprocated."

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