The Influence of Sex Ratio on Saving, Borrowing, and Spending: An Experimental Approach

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Summary

The ratio of males to females in a population is known to be an important factor in mating and parenting behavior in animals. Sex ratio has pervasive effects in humans that go beyond typical mating behaviors, such as by influencing common economic decisions. Two experiments examined how perceived male-biased versus female-biased sex ratios influence financial decisions regarding saving, borrowing, and spending.

Male-biased ratios led men to discount the future—to desire access to immediate monetary resources at the expense of larger, later returns. Male-biased ratios also decreased men's financial saving for the future, while increasing willingness to incur debt for immediate expenditures.

These findings are the first to demonstrate experimentally that sex ratio influences human decision-making in ways consistent with evolutionary biological theory, opening the possibility for uncovering how sex ratio might influence myriad human behaviors.

Experiments 1 and 2 tested how perceived male-biased versus female-biased sex ratios influenced individuals financial decisions, preferences, and expectations regarding saving, borrowing, and spending money.

Experiment 1

In experiment 1, participants viewed photo arrays that were ostensibly indicative of the local population, and either male-skewed or female-skewed. Participants then made a series of financial choices involving real monetary incentives. For example, people chose between receiving $37 tomorrow versus $54 in 33 days.

Design

2 X 2 design: participant sex (male or female) X sex ratio (male-biased or female-biased)

Sex bias – participants viewed 3 arrays of 18 photos each

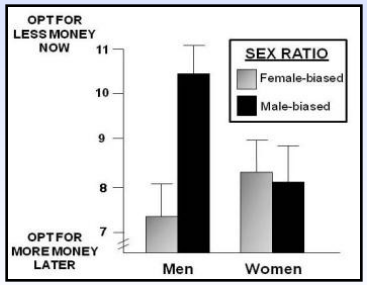
Female-biased condition: 13, 12, and 14 of the 18 faces in each of the three arrays were female

Male-biased condition: 13, 12, and 14 of the faces were male

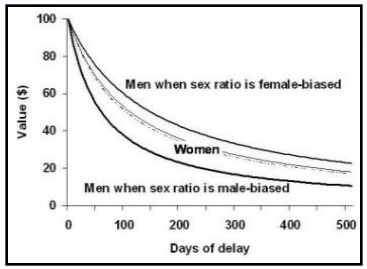
Participants were told that the pictures were for a memory task later in the study

Temporal discounting measures – participants made a series of 20 choices, choosing between receiving a specified amount of money tomorrow versus receiving a larger amount of money 33 days from now

Results



Number of times men and women chose to take less money now rather than wait for more money later as a function of sex ratio with std. error bars



The value of a nominal $100 over time for men and women as a function of sex ratio

Experiment 2

In experiment 2, participants read news articles describing the local population as either male-biased or female-biased.

Participants then indicated how much money they would save each month from a paycheck, as well as how much money they would borrow each month (via interest-bearing credit cards) for immediate expenditures

Design

2 X 2 design: participant sex (male or female) X sex ratio (male-biased or female-biased)

Sex bias – participants read one of two short news articles generated specifically for this study, but seemingly taken from the *Chicago Tribune*

Female-biased condition: News article described how there are more women on college campuses than men today.

Male-biased condition: News article described how there are more men on college campuses than women today.

Participants were told that the articles would be used for a memory task later in the study

Dependent Measures:

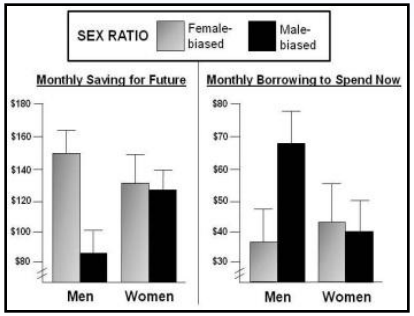
Participants were told they have $2000 of take-home income after college.

For *saving*, they were asked, "Of your $2000 of monthly take-home income, how much money do you intend to set aside for savings each month?"

For *borrowing*, they were asked, "How much money would you be comfortable with borrowing each month to spend on things that you might not be able to afford?"

For both questions, responses were provided on an 11-point scale ranging from "$0" to "$250 or more" in $25 increments.

Results



Men's and women's intended monthly saving and borrowing amount as a function of sex ratio with std. error bars

Conclusion

In both experiments, men were more likely to take on higher financial risk when under the male-biased condition. Under the male-biased condition, men are more likely to want immediate financial resources, even if the monetary amount is smaller. Men also were more likely to save less and take on more debt under the male-biased condition.

Consideration of sex ratio has important implications for individuals, nations, and public policy. When sex ratios become more male-biased, problems associated with impulsive risk-taking are likely to become even more prevalent. This suggests that the male-biased demographic shifts currently occurring in many parts of Asia (Gu & Roy, 1995; Guilmoto, 2009; Hesketh, 2009 Jha et al., 2006; Sahni et al., 2008) could have large social and economic consequences. In addition to potential increases in impulsiveness and financial risk-taking, consider the future fate of an aging generation of men who, as younger adults, spent and borrowed money instead of saving it.