

Commentary and Debate

To conserve space for the publication of original contributions to scholarship, the comments in this section must be limited to brief critiques. They are expected to address specific errors or flaws in articles and reviews published in the *AJS*. Comments on articles are not to exceed 1,500 words, those on reviews 750 words. Longer or less narrowly focused critiques should be submitted as articles. Authors of articles and reviews are invited to reply to comments, keeping their replies to the length of the specific comment. The *AJS* does not publish commenters' rebuttals to authors' replies. We reserve the right to reject inappropriate or excessively minor comments.

COMMENT: WHY WE LOVE OUR CHILDREN¹

Role conflict is one of the oldest concepts in sociology (Stryker and Macke 1978). It occurs when actors pursue two or more roles that are incompatible with each other, given the actors' limited resources. (If actors had unlimited time, energy, and other resources, they would never experience role conflict.) As an increasing number of women move into life-long labor force participation, the work/family conflict that these women experience when they are simultaneously full-time workers and mothers of small children has become a particularly important topic for sociological research (Moen 1992). At the same time, because an increasing number of men are now married to these women and carry out some of the child care responsibilities, more men experience greater work/family conflict than ever before (Gerson 1993).

Given that their work roles place certain demands on them, employed parents would experience the work/family conflict to the extent that they desire to spend more time and energy on their roles as parents. Thus the question of the work/family conflict is partially a question of parental investment (as well as partially a question of work investment). Why do

¹ I thank Paula England, Jeremy Freese, Rosemary L. Hopcroft, Matthew C. Keller, and Alan S. Miller for their comments on earlier drafts, and Cary Lee Coryell and Abigail Iris Coryell for the essential insight. Direct all correspondence to Satoshi Kanazawa, Department of Sociology, Indiana University of Pennsylvania, Indiana, Pennsylvania 15705-1087. E-mail: Kanazawa@grove.iup.edu

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some parents choose to spend more time and energy to take care of their children than others?

The question of role conflict, and of why some parents choose to make greater parental investment into their children than others, points to a larger theoretical question: Why do actors choose to pursue what they pursue (be it work or parental investment or anything else)? Why do actors want what they want? If individuals do not pursue parenthood and employment simultaneously, they would not experience the dilemma of the work/family conflict. Since role conflict of any kind has almost entirely negative consequences, no rational persons would *choose* to experience role conflict if they had a choice. The fact that role conflict is nonetheless very prevalent seems to suggest that the goals actors pursue when they play mutually incompatible roles are *not consciously chosen*. Where then do actors' values and preferences (which define their goals) come from?

I contend that evolutionary psychology can answer the question of where values and preferences come from (Kanazawa 2001) and can therefore explain why some parents choose to invest more time and energy into their children than others. One evolutionary psychological theory of parental investment (known as the Trivers-Willard hypothesis; Trivers and Willard 1973), for instance, explains why wealthy parents value sons over daughters while poor parents value daughters over sons. However, a recent empirical test of the hypothesis (Freese and Powell 1999) finds absolutely no support for it, thereby throwing into question the relevance of evolutionary psychology for traditional sociological problems. In this brief comment, I will first present the fundamental principles of evolutionary psychology and point out one minor problem with Freese and Powell's test of the Trivers-Willard hypothesis, which might very well have led to their null finding. I will then present my own empirical test of the hypothesis, using data from the National Survey of Families and Households, which supports the hypothesis.

PRINCIPLES OF EVOLUTIONARY PSYCHOLOGY

Evolutionary psychology explains human cognition and behavior in terms of evolved psychological mechanisms. *An evolved psychological mechanism* is an information-processing procedure or decision rule that evolution by natural and sexual selection has equipped humans to possess in order to solve a particular adaptive problem (a problem of survival or reproduction). Unlike decision rules in microeconomic subjective expected utility maximization theory or game theory, however, psychological mechanisms mostly operate *behind our conscious thinking*.

Male sexual jealousy is an example of an evolved psychological mechanism (Daly, Wilson, and Weghorst 1982). Because gestation in human and most other mammalian species occurs inside the female body, males of these species can never be certain of the paternity of their mates' offspring, while females are always certain of their maternity. In other words, the possibility of cuckoldry exists only for males. Men who are cuckolded and invest their resources in the offspring of other men end up wasting these resources, and their genes will not be represented in the next generation. Men therefore have a strong reproductive interest in making sure that they will not be cuckolded, while women do not share this interest. Accordingly, men have developed a psychological mechanism that makes them extremely jealous at even the remotest possibility of their mates' sexual infidelity. The psychological mechanism of sexual jealousy attenuates men's adaptive problem of paternal uncertainty. The same psychological mechanism often leads to men's attempt at mate guarding, in order to minimize the possibility of their mates' sexual contact with other men, sometimes with tragic consequences (Buss 1988; Buss and Shackelford 1997).

While men and women are the same in the frequency and intensity of their jealousy in romantic relationships (White 1981; Buunk and Hupka 1987), there are clear sex differences in what triggers jealousy. There is both survey and physiological evidence from different cultures to show that men get jealous of their mates' *sexual infidelity* with other men, underlying their reproductive concern for cuckoldry. In contrast, women get jealous of their mates' *emotional involvement* with other women, because emotional involvement elsewhere often leads to diversion of their mates' resources from them and their children to their romantic rivals (Buss, Larsen, and Weston 1992; Buss et al. 1999).

Note that we do not consciously *choose* or *decide* to get jealous. We just get jealous under some circumstances, in response to certain predictable triggers, but otherwise do not know why. However, what triggers jealousy is always understandable to others, and these triggers are also cross-culturally constant (Thiessen and Umezawa 1998); otherwise, no romance novels or romantic comedies would ever become international hits. Evolutionary psychology contends that evolved psychological mechanisms are responsible for most of our emotions, and they are also behind most of our preferences and desires (Kanazawa 2001). Evolutionary psychology explains human cognition and behavior in terms of these evolved psychological mechanisms (and the preferences, desires, and emotions they produce in us).

Evolutionary psychology contends that the entire human body (including the brain and its psychological mechanisms) evolved over millions of years during the Pleistocene epoch in the African savanna where humans

lived during most of this time (Maryanski and Turner 1992, pp. 69–90). This environment—the African savanna where humans lived in small bands of 50 or so related individuals as hunter-gatherers²—is called the environment of evolutionary adaptedness (EEA) (Bowlby 1969) or ancestral environment, and it is to the EEA that our body (including the brain and its psychological mechanisms) is adapted. To the extent that the current environment in which we live is different from the EEA, evolutionary psychology predicts that our cognition and behavior are not necessarily adaptive (“fitness maximizing”). “The adaptive correspondence between present conditions and present behavior, to the extent that it exists, is contingent, derived and incidental to Darwinian explanation. It depends solely on how much the present ontogenetic environment of an individual happens to reflect the summed features of the environment during recent evolutionary history, that is, on how different the present environment is from ancestral conditions” (Tooby and Cosmides 1990, p. 378).

Recall the example of male sexual jealousy as an evolved psychological mechanism. This psychological mechanism solved the adaptive problem of successful reproduction in the EEA by allowing men who possessed it to maximize paternal certainty and minimize the possibility of cuckoldry. Their sexual jealousy was therefore fitness maximizing *in the EEA*. However, we now live in an environment where sex and reproduction are often separated (in that many episodes of copulation do not lead to reproduction). There is an abundance of reliable methods of birth control, and many married women in industrial societies use the birth control pill. For these women, sexual infidelity does not lead to childbirth, and their mates will not have to waste their resource on someone else’s offspring. In other words, the original adaptive problem no longer exists. Yet men still possess the same psychological mechanism to make them jealous at the possibility

² As a first approximation, it might be useful to think of the EEA as the African savanna during the Pleistocene era, because this is indeed where many psychological mechanisms evolved. Technically, however, the EEA “is not a place or a habitat, or even a time period. Rather, it is a statistical composite of the adaptation-relevant properties of the ancestral environments encountered by members of ancestral populations, weighted by their frequency and fitness-consequences” (Tooby and Cosmides 1990, pp. 386–87). In other words, the EEA might be different for different adaptations. For instance, in order to pinpoint the EEA for male sexual jealousy as an adaptation, we need to consider the entire period of evolution from the time when males did not have sexual jealousy (this is likely to be long before they were human) until the time when all human males had the psychological mechanism of sexual jealousy that they currently possess. This is likely the period during which cuckoldry was a problem for paternal certainty. Further, we must emphasize the period during which cuckoldry was more prevalent (weight by frequency) and during which males with sexual jealousy had particularly greater reproductive success than those without it (weight by fitness-consequences).

of their mates' sexual infidelity and to compel them to guard their mates to minimize the possibility of cuckoldry. *No man would ever be comforted by the fact that his adulterous wife was on the pill at the time of her sexual infidelity.*

Further, because our environment is so vastly different from the EEA, we now face a curious situation where those who behave according to the dictates of the evolved psychological mechanism are often *worse off* in terms of survival and reproduction. Extreme forms of mate guarding, such as violence against mates or romantic rivals, are felonies in most industrial nations. Incarceration, and consequent physical separation from their mates, to which such violence can lead, does everything to *reduce* the reproductive success of the men. Just as our taste for fats and sweets (which increased our chances of survival and reproductive success in the EEA) makes us obese and reduces our chances of survival and reproductive success today, uncritically following the emotions and desires created in us by our evolved psychological mechanisms often leads to maladaptive behavior.

It is my contention that the evolved psychological mechanisms produce values and preferences in us. No matter what individuals' values and preferences are, they are always in the brain. It is therefore important to figure out how the human brain works in order to solve the problem of values. It is the basic principle of evolutionary psychology that the brain consists of evolved psychological mechanisms. These psychological mechanisms create values and preferences that motivate human behavior. Human actors take these values and preferences as their goals and make rational decisions to pursue these goals in the context of structural and institutional constraints. I therefore contend that evolutionary psychology is key to any theory of values.

PARENTAL INVESTMENT: THE TRIVERS-WILLARD HYPOTHESIS AND FREESE AND POWELL

The Trivers-Willard hypothesis (Trivers and Willard 1973) is unique within evolutionary psychology in that it makes class-based predictions of parental investment behavior and, in that sense, is particularly relevant to traditional concerns of sociologists. It begins with the observation, later confirmed by a large cross-cultural study (Buss 1989), that men's reproductive success largely depends on their wealth and status (because women prefer to mate with wealthy, powerful men) and women's reproductive success largely depends on their youth and physical attractiveness (because men prefer to mate with young, physically attractive women). In other words, men's reproductive success hinges on factors that are

closely associated with class, whereas women's reproductive success hinges on factors that are mostly orthogonal to class. For this reason, daughters from poor families are expected to attain higher reproductive success than their brothers, whereas sons from wealthy families are expected to attain higher reproductive success than their sisters. Parents should thus be selected to favor (albeit unconsciously) daughters over sons in poor families and sons over daughters in wealthy families. The Trivers-Willard hypothesis has been supported by a large number of empirical studies on societies across history and throughout the world, including the contemporary United States (Betzig and Weber 1995; Gaulin and Robbins 1991). Cronk (1991) provides a comprehensive review of the empirical evidence in support of the hypothesis.

Most recently, Freese and Powell (1999) subject the Trivers-Willard hypothesis to a rigorous empirical test. Freese and Powell's article is highly commendable on at least three separate counts. First, unlike most sociologists, who tend to dismiss all biological explanations of human behavior on political and ideological grounds, Freese and Powell take evolutionary psychology seriously. Their article begins and ends with a sincere call to fellow sociologists to examine evolutionary psychology as a possible source of explanations of human behavior. Second, once again unlike most sociologists, Freese and Powell are enormously knowledgeable about evolutionary psychology. Their critique of it, unlike that by many social scientists, decidedly does *not* stem from their ignorance of what they criticize. In particular, they are precisely correct when they state: "Once such a tendency [for wealthy families to favor sons over daughters and poor families to favor daughters over sons] has evolved, its influence on parental investment should persist even in evolutionary environments in which a Trivers-Willard effect does not contribute to greater fertility (e.g., in contemporary American society and others in which social status and number of offspring are not positively related)." In other words, Freese and Powell explicitly recognize that evolved psychological mechanisms (such as the one that produces the Trivers-Willard effect) need only be adaptive in the EEA, and not necessarily in the current environment. Third, they put evolutionary psychological hypotheses to rigorous empirical tests. They recognize that the merit of a scientific perspective does not rest on its ideological and political implications, but rather on its ability to explain empirical data.

Despite their extreme seriousness, competence, and rigor, however, Freese and Powell find absolutely no empirical support for the Trivers-Willard hypothesis in their analysis of two large nationally representative data sets (the National Educational Longitudinal Study of 1988 and the High School and Beyond Study of 1980). They use a large number of measures of parental investment and predict, following Trivers and Wil-

lard (1973), that the interaction term of class (measured either by income or parent's education) and the child's sex should have a significant effect on the level of parental investment into the child. Only one of the 60 interaction effects presented in their tables 3–5 is statistically significant in the predicted direction (far worse than expected by chance); nine are statistically significant in the opposite direction. From the overall pattern of the results, Freese and Powell conclude that there is no empirical support for the Trivers-Willard hypothesis.

Why do they fail to find any empirical support for the hypothesis? I believe their null findings are the result of one small error they commit, in an uncharacteristic moment of weakness *when they fail to heed their own admonition to fellow sociologists*. I believe that their problem lies in their choice of the dependent variables. Seven of the 12 dependent measures of parental investment in their analysis of the National Educational Longitudinal Study and four of the six dependent measures in their analysis of the High School and Beyond Study refer specifically to parental investment into the children's *education*. These include measures of parents' economic investment into the children's education (whether the parents have begun saving for their children's college, how much money they have saved for college, whether the children go to private school, and the number of educational items in the household, such as encyclopedia and atlas) and measures of parents' involvement in children's education (the frequency of conversation about school, the parents' involvement with the children's school, and the parents' involvement in the parent-teacher organization).

In the current environment, higher education, and the subsequent career opportunities that it affords, are equally important for sons and daughters. *However, it is highly unlikely that our evolved psychological mechanisms, adapted to the EEA, would consider higher education as investment into sons and daughters alike*. What education does is to increase the child's future earnings and status. These are factors that increase only the sons' reproductive success, not the daughters'. Our psychological mechanisms, adapted to the EEA, would consider (albeit completely unconsciously) investment into children's education as parental investment only for sons, not for daughters. I believe that the slight problem in Freese and Powell's data analysis is that most of their measures of parental investment are specific to male offspring, and this minor error may have led to their null findings.³ Freese and Powell warn fellow so-

³ Another potential problem is the sample selection bias. Their table 1 indicates that the mean family income in 1987 among the respondents in the National Educational Longitudinal Study is \$41,600. This seems inordinately high. The mean family income in the same year for respondents in the National Survey of Family and Households

ciologists to beware of the differences in the EEA and the current environments, yet fail to heed their own advice in their selection of the dependent variable.

Among their measures of the dependent variable, only one (monitoring of child's behavior) is specific to female offspring. One of the things parents can do to increase the reproductive success of their daughters is to limit or eliminate the sexual access men have to their daughters and thereby to protect their daughters' sexual reputation. Parental monitoring of the children's behavior achieves this goal. (Once again, this truly contributes to the daughters' reproductive success only in the EEA.) It is interesting to note in this regard that this dependent measure consistently behaves differently from all the other measures in Freese and Powell's analysis, so much so that it leads the authors to question whether this is indeed a measure of parental investment (Freese and Powell 1999, p. 1728). I believe that this measure behaves differently from all the others because it is a female-specific measure of parental investment, while most of the others are male-specific ones. Freese and Powell (1999, p. 1729 n. 21) also state that poor parents monitor their daughters more closely (thereby contributing to their daughters' reproductive success) than wealthy parents. This finding is also consistent with my interpretation.

I therefore regard Freese and Powell's otherwise competent analysis to be inconclusive with regard to the empirical status of the Trivers-Willard hypothesis in the contemporary United States. I will use another large, nationally representative data set to subject the hypothesis to an empirical test once again. I will take particular care to select sex-neutral measures of parental investment in my analysis.

ANOTHER EMPIRICAL TEST OF THE TRIVERS-WILLARD HYPOTHESIS

Data

I use the first wave of the National Survey of Families and Household as my data. A nationally representative sample of 13,007 respondents was surveyed in 1987 and 1988, through a combination of personal interviews and self-administered questionnaires. My sample includes all respondents who have at least one biological child under age 18 in the household ($N = 6,034$).

is \$29,100. Freese and Powell may therefore not have a sufficient variation in class positions in one of their data sets.

Dependent Variable: Parental Investment

In one part of the self-administered questionnaire, respondents who had at least one biological child in the household were asked a series of questions regarding their activities with their children. Respondents who had children between the ages of 5 and 18 were asked how frequently they engaged in the following activities with their children: (a) in leisure activities away from home (picnics, movies, sports, etc.); (b) at home working on a project or playing together; (c) having private talks; (d) helping with reading or homework. Responses to each of these questions varied from 0 (never or rarely) to 6 (almost every day). In my analysis of parents with children ages 5–18, I use the sum of their responses to these four questions. The dependent measure for these analyses therefore varies from 0 to 24.

Respondents who had children between the ages of 0 and 4 (but no children between the ages of 5 and 18) were asked how frequently they engaged in the following activities with their children: (a) an outing away from home (at parks, museums, zoos, etc.); (b) at home playing together; (c) reading to the child. Responses to each of these questions once again varied from 0 (never or rarely) to 6 (almost every day), and thus the sum of the three items varied from 0 to 18. Because the two mutually exclusive categories of parents (those with only children under 5, and those who have at least one child over 5) were asked different numbers of questions regarding their activities with their children, these two categories of cases cannot easily be combined. I therefore standardized both dependent variables before merging the two sets of parents and used the standardized score as the dependent variable in my analysis of all parents (those with only children under 5 and those with at least one child over 5).

Note that none of the component questions in my measure of parental investment refer specifically to higher education. Nor are any of them sex-specific in any way. Both boys and girls benefit from engaging in these activities with their parents. I therefore believe that, unlike Freese and Powell's measures of parental investment, mine are sex-neutral. Of course, my claim is decidedly *not* that parents consciously calculate that taking their sons or daughters to the zoo more often will increase their reproductive success by turning their children into more desirable mates in the future. As I stated earlier, conscious thinking is usually not involved in the operation of psychological mechanisms. My claim instead is that wealthy parents *unconsciously value* their sons more than daughters and poor parents *unconsciously value* their daughters more than sons, and the extent to which they value their sons or daughters will manifest itself as their desire to be with and take care of their children. The activities selected above are just some of the (sex-neutral) ways in which the parents'

desire to take care of their children, produced by how much they value them, manifests itself.

Independent Variables

For each parent, I measure whether they have at least one girl between the ages of 10 and 15 and whether they have at least one boy between the ages of 10 and 15 (for both, 1 = yes). I follow Freese and Powell in focusing on sons and daughters at the onset of puberty. In the EEA, individuals began their competition for mates when they reached puberty, and this was therefore the crucial time for parents to invest in their children in order to maximize their reproductive success. There is evidence that parents value children at the onset of puberty more than at any other age (Crawford, Salter, and Jang 1989; Littlefield and Rushton 1986).

In addition to these crucial predictor variables, I include controls for sex (male = 1), age, race (black = 1), education, and occupational prestige. Evolutionary psychology predicts that mothers will make greater parental investment than fathers for a couple of reasons. First, women have a much lower fitness ceiling than men do; men can potentially produce a far greater number of children in their lifetime than women can. Thus, even though *reproductive success* is equally important for men and women, *each child* is more valuable to a woman than it is to a man because it represents a greater share of a woman's lifetime reproductive potential than a man's. Thus we expect mothers to value each child more than fathers do. Second, mothers are certain of their maternity, whereas fathers cannot be certain of their paternity. For both of these reasons, we expect mothers to make greater parental investment than fathers, and this prediction is consistently supported throughout my data analysis below. However, this prediction is not unique to evolutionary psychology (like the Trivers-Willard hypothesis is), so it cannot shed light on the empirical merit of evolutionary psychology relative to other theoretical perspectives. I will therefore not concentrate on the effect of sex in this comment.

Social Class

I divide my sample into rough quartiles according to their annual family income: (1) those with less than \$10,000 ($N = 934$); (2) those between \$10,000 and \$25,000 ($N = 1,323$); (3) those between \$25,000 and \$40,000 ($N = 1,143$); and (4) those with more than \$40,000 ($N = 1,442$), with 1,192 cases with missing values on family income. In my analysis, I compare the top and the bottom quartiles to maximize the contrast of class positions.

Results

Table 1 presents the results of regression analyses of parents with children of all ages (0–18). Because the unit of the dependent variable has no intrinsic meaning (expressed as standard scores), I present only the standardized coefficients in my tables. In the left column (bottom quartile), it shows that having pubescent girls significantly ($P < .05$) increases parents' investment into the children, while having pubescent boys seems to decrease it (albeit statistically nonsignificantly). This is consistent with the Trivers-Willard hypothesis that parents in poor families invest more in their daughters than in their sons. In the right column (top quartile), it shows that having pubescent girls significantly ($P < .10$) decreases parental investment while having pubescent boys equally significantly ($P < .10$) increases it. Once again, this is perfectly consistent with the Trivers-Willard hypothesis that wealthy families favor sons over daughters.

The empirical pattern is essentially the same in my analysis of a subset of the parents with at least one child between the ages of 5 and 18, presented in table 2. Even though the dependent variable here is not a standard score, I continue to present the standardized coefficients to facilitate comparison across tables. In the left column (bottom quartile), having pubescent girls significantly ($P < .10$) increases parents' investment into the children, while having pubescent boys decreases it (albeit statistically nonsignificantly). In the right column (top quartile), having pubescent boys statistically significantly ($P < .05$) increases parental invest-

TABLE 1
PARENTAL INVESTMENT, ALL CHILDREN AGES 0–18

	CLASS	
	Bottom Quartile Beta	Top Quartile Beta
Predictors:		
Girls 10–15 .....	.1217*	-.0525
Boys 10–15	-.0136	.0526
Control variables:		
Sex (male = 1)	-.2090***	-.1343***
Age	-.0652	.1568****
Race (black = 1)	-.0563	.0347
Education .....	.2278***	.0845*
Occupational prestige ...	.0701	.0300
R^2 .....	.1193	.0641
N	348	1,161

* $P < .05$.
 ** $P < .01$.
 *** $P < .001$.
 **** $P < .0001$.

TABLE 2
PARENTAL INVESTMENT, CHILDREN AGES 5-18

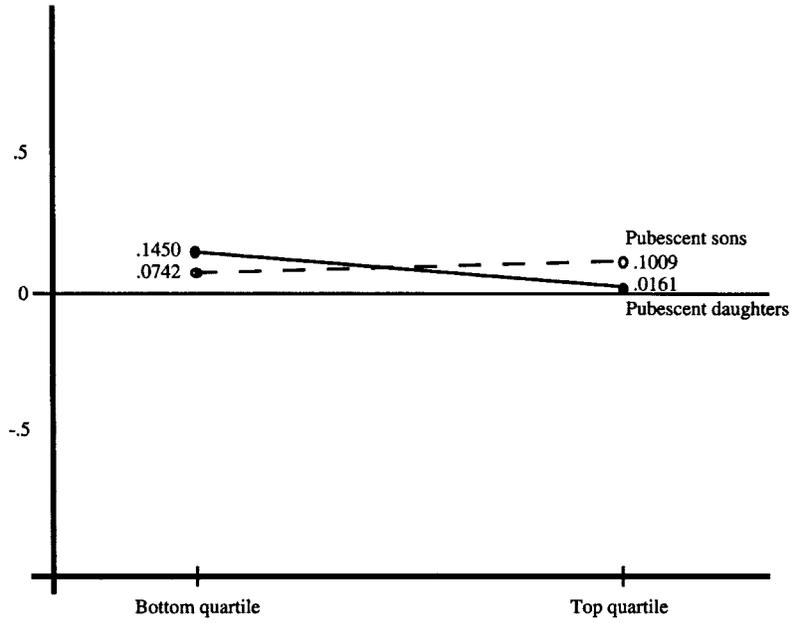
	CLASS	
	Bottom Quartile Beta	Top Quartile Beta
Predictors:		
Girls 10-15 .....	.1147	-.0389
Boys 10-15	-.0614	.0752*
Control variables:		
Sex (male = 1)	-.1512*	-.1077**
Age	-.2600***	-.2995****
Race (black = 1)	-.0506	-.0412
Education .....	.1800*	.1533***
Occupational prestige ...	.0853	.0073
R^2 .....	.1640	.1261
N	209	760

* $P < .05$.
 ** $P < .01$.
 *** $P < .001$.
 **** $P < .0001$.

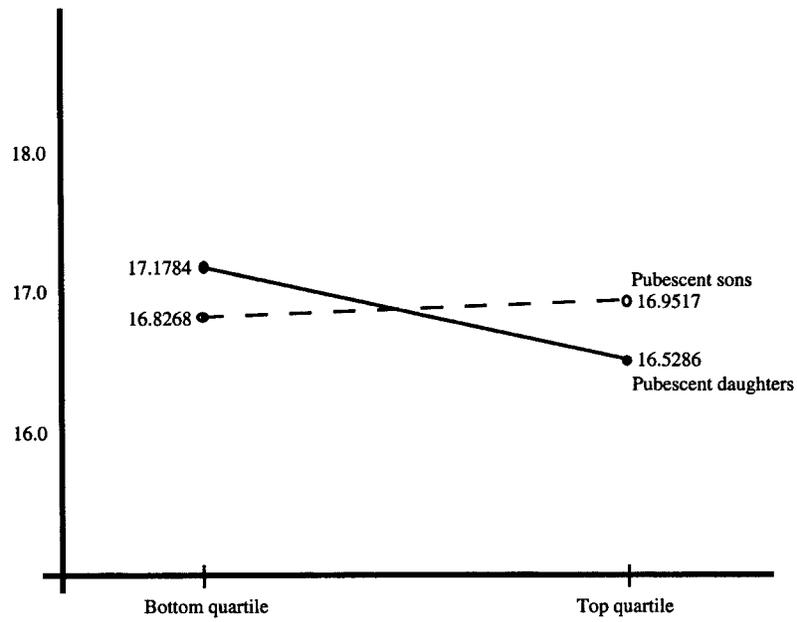
ment, while having pubescent girls decreases it (albeit statistically nonsignificantly). Once again, the overall pattern is perfectly consistent with the Trivers-Willard hypothesis. Parents in poor families favor daughters over sons, while those in wealthy families favor sons over daughters.

Figure 1 compares the mean levels of parental investment between the bottom and top quartiles. The top panel (fig. 1a) compares the means of the standard scores among all parents. The dotted line is for respondents with pubescent sons, and the straight line is for respondents with pubescent daughters. (Compare my fig. 1 to Freese and Powell's [1999] fig. 1.) The figure shows that, among the respondents in the bottom quartile (with the family income less than \$10,000 in 1987), those with pubescent daughters make greater parental investment than those with pubescent sons (0.1450 vs. 0.0742). Among respondents in the top quartile (with family income more than \$40,000 in 1987), those with pubescent sons make greater parental investment than those with pubescent daughters (0.1009 vs. 0.0161).

The bottom panel (fig. 1b) compares the means of the sum of parental investment across the four activities for parents with at least one child between the ages of 5 and 18. The Trivers-Willard pattern is again evident here. Among the respondents in the bottom quartile, those with pubescent daughters make greater parental investment than those with pubescent sons (17.1784 vs. 16.8268). Among the respondents in the top quartile, those with pubescent sons make greater parental investment than those



a) For all children ages 0-18



b) For children ages 5-18

FIG. 1.—Mean levels of parental investment into sons and daughters, by class

with pubescent daughters (16.9517 vs. 16.5286). Both figures exhibit the pattern presented in Freese and Powell's figure 1 (1999, p. 1710), depicting the theoretical prediction of the Trivers-Willard hypothesis.

DISCUSSION

The analysis of the National Survey of Families and Households provides support for the Trivers-Willard hypothesis. However, the observed effect is quite weak (often at $P < .10$). If Trivers-Willard hypothesis is true, why does the hypothesized psychological mechanism not produce a stronger preference for sons among wealthy parents and one for daughters among poor families?

I believe this is because the *necessity* to choose one sex over the other, an important scope condition for the Trivers-Willard hypothesis, is not urgent in the current environment.⁴ Relative to our ancestors in the EEA, contemporary Americans, even those in poverty, are so materially rich, and have so few children, that the necessity to choose sons or daughters in whom to invest limited resources is often absent. We can sometimes invest maximally in both sons and daughters simultaneously, to insure the reproductive success of both. Although the psychological mechanism behind the Trivers-Willard hypothesis, being part of our innate human nature, is still there, and would operate when the circumstances require it, the contemporary United States, one of the wealthiest societies in the human evolutionary history, might not provide the required circumstances. I would therefore expect to find a stronger effect of class on parents' preference for one sex over the other in societies where resources are more scarce and fertility is higher.

In the final analysis, Freese and Powell are right about one thing. The ultimate fate of a theoretical perspective should and does rest on its ability to explain empirical phenomena, rather than its political and ideological implications. The only way to evaluate a theoretical perspective is therefore to continue to subject its theories to rigorous empirical tests and compare their performance to that of other theoretical perspectives. This comment is therefore "just another brick in the wall" (Buss 1997), building the empirical foundation of evolutionary psychology and its relevance to traditional sociological questions.

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⁴I owe this insight to Rosemary L. Hopcroft.

REFERENCES

- Betzig, Laura, and Samantha Weber. 1995. "Presidents Preferred Sons." *Politics and the Life Sciences* 14:61–64.
- Bowlby, John. 1969. *Attachment*. Vol. 1 of *Attachment and Loss*. New York: Basic.
- Buss, David M. 1988. "From Vigilance to Violence: Tactics of Mate Retention." *Ethology and Sociobiology* 9:291–317.
- . 1989. "Sex Differences in Human Mate Preferences: Evolutionary Hypotheses Tested in 37 Cultures." *Behavioral and Brain Sciences* 12:1–49.
- . 1997. "Just Another Brick in the Wall: Building the Foundation of Evolutionary Psychology." Pp. 191–93 in *Human Nature: A Critical Reader*, edited by Laura Betzig. New York: Oxford University Press.
- Buss, David M., Randy J. Larsen, and Drew Westen. 1992. "Sex Differences in Jealousy: Evolution, Physiology, and Psychology." *Psychological Science* 3:251–55.
- Buss, David M., and Todd K. Shackelford. 1997. "From Vigilance to Violence: Mate Retention Tactics in Married Couples." *Journal of Personality and Social Psychology* 72:346–61.
- Buss, David M., Todd K. Shackelford, Lee A. Kirkpatrick, Jae C. Choe, Mariko Hasegawa, Toshikazu Hasegawa, and Kevin Bennett. 1999. "Jealousy and the Nature of Beliefs about Infidelity: Tests of Competing Hypotheses about Sex Differences in the United States, Korea, and Japan." *Personal Relationships* 6: 125–50.
- Buunk, Bram, and Ralph B. Hupka. 1987. "Cross-Cultural Differences in the Elicitation of Sexual Jealousy." *Journal of Sex Research* 23:12–22.
- Crawford, Charles B., Brenda E. Salter, and Kerry L. Jang. 1989. "Human Grief: Is Its Intensity Related to the Reproductive Value of the Deceased?" *Ethology and Sociobiology* 10:297–307.
- Cronk, Lee. 1991. "Preferential Parental Investment in Daughters over Sons." *Human Nature* 2:387–417.
- Daly, Martin, Margo Wilson, and Suzanne J. Weghorst. 1982. "Male Sexual Jealousy." *Ethology and Sociobiology* 3:11–27.
- Freese, Jeremy, and Brian Powell. 1999. "Sociobiology, Status, and Parental Investment in Sons and Daughters: Testing the Trivers-Willard Hypothesis." *American Journal of Sociology* 106:1704–43.
- Gaulin, Steven J. C., and Carole J. Robbins. 1991. "Trivers-Willard Effect in Contemporary North American Society." *American Journal of Physical Anthropology* 85:61–69.
- Gerson, Kathleen. 1993. *No Man's Land: Men's Changing Commitment to Family and Work*. New York: Basic.
- Kanazawa, Satoshi. 2001. "De Gustibus Est Disputandum." *Social Forces* 79:1131–63.
- Littlefield, Christine H., and J. Philippe Rushton. 1986. "When a Child Dies: The Sociobiology of Bereavement." *Journal of Personality and Social Psychology* 51: 797–802.
- Maryanski, Alexandra, and Jonathan H. Turner. 1992. *The Social Cage: Human Nature and the Evolution of Society*. Stanford, Calif.: Stanford University Press.
- Moen, Phyllis. 1992. *Women's Two Roles: A Contemporary Dilemma*. New York: Auburn House.
- Stryker, Sheldon, and Anne Statham Macke. 1978. "Status Inconsistency and Role Conflict." *Annual Review of Sociology* 4:57–90.
- Thiessen, Del, and Yoko Umezawa. 1998. "The Sociobiology of Everyday Life: A New Look at a Very Old Novel." *Human Nature* 9:293–320.
- Tooby, John, and Leda Cosmides. 1990. "The Past Explains the Present: Emotional Adaptations and the Structure of Ancestral Environments." *Ethology and Sociobiology* 11:375–424.

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- Trivers, Robert L., and Dan E. Willard. 1973. "Natural Selection of the Parental Ability to Vary the Sex Ratio of Offspring." *Science* 179:90–91.
- White, Gregory L. 1981. "Some Correlates of Romantic Jealousy." *Journal of Personality* 49:129–47.