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Margaret F. Brinig
Notre Dame Law School, mbrinig@nd.edu

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DOES MEDIATION SYSTEMATICALLY DISADVANTAGE WOMEN?

MARGARET F. BRINIG*

When state legislatures enabled spouses to obtain divorces without proving fault,¹ one of the real achievements was lower transaction costs.² Although the benefit of lower transaction costs for divorce is not completely noncontroversial,³ the relaxed proof

* Professor of Law at George Mason University School of Law. I owe thanks to the George Mason Law School for research assistance, to the Law and Economics Workshop at George Mason University for many helpful comments, and to many individuals who have read this paper and offered suggestions. Among these are Michael Alexeev, Ian Ayres, Katherine Bartlett, Jane Cohen, Steven Crafton, Christine Jolls, Bruce Kobayashi, David Levy, Timothy Muris, Richard Posner, and Samuel Rea. Data collection would have been impossible without the help of Mary M. Brinig.


In Wisconsin, one study showed that mediating couples spent about one-fifth as much on legal fees as those that pursued an adversary divorce. Howard Ehringer et al., The Process of Negotiation: An Exploratory Investigation in the Context of No-Fault Divorce, 40 WIS. L. REV. 1133, 1142 (1988).

3. Douglas Allen, What's At Fault with No-Fault (Working Paper presented at the Canadian Law and Economics Association meeting, Toronto, September 25, 1992); ALLEN M. PARKMAN, NO-FAULT DIVORCE: WHAT WENT WRONG? 63 (1992). These authors argue that the lower transaction costs cause some inefficient divorces; couples who ought to stay together because of the high value of marriage for one party divorce because the other can exit the marriage without incurring high costs.
requirements mean that lawyers do not necessarily have to be involved in divorce proceedings. The vast majority of marriage dissolutions involve written agreements between the parties. No-fault divorce also energized the divorce mediation movement.

Mediation is the least intrusive form of third-party involvement in a dispute. Whereas a judge or arbitrator imposes an outcome on the disputants, the mediator assists the parties in reaching a mutually satisfactory agreement. The mediator helps to “identify the issues, reduce misunderstandings, vent emotions, clarify priorities, find points of agreement, and explore new areas of compromise and possible solutions.”

Family mediation is seen as an opportunity to provide “divorcing couples with an opportunity to nurture” their necessarily continuing relationships. No longer must the divorcing couple engage in legal combat. A group of nonlawyer divorce mediators explains that mediation was “believed to be more expeditious, less expensive, procedurally reasonable, and amenable to truth-

4. Dramatic changes in divorce law during the past decade now permit a substantial degree of private ordering. The “no-fault revolution” has made divorce largely a matter of private concern. Parties to a marriage can now explicitly create circumstances that will allow divorce. Indeed, agreement between spouses is not necessary in most states; either spouse can unilaterally create the grounds for dissolution simply by separation for a sufficient period of time.


5. STEPHEN B. GOLDBERG ET AL., DISPUTE RESOLUTION 91 (1986); see also HOWARD RAFF, THE ART AND SCIENCE OF NEGOTIATION (1982) (defining a mediator as an impartial outsider who aids negotiators in their quest to find a compromise agreement).


7. In most divorcing families there are minor children. Although the parties no longer live together, they must co-parent for some period of time, thus continuing their relationship. See, e.g., John S. Murray, Improving Parent-Child Relationships Within the Divorced Family: A Call for Legal Reform, 19 U. MICH. J. L. REF. 563 (1998); see also Gary J. Friedman & Margaret L. Anderson, Divorce Mediation's Strengths.,.,, 3 CAL. LAW 36 (July 1983) (“Couples have found that the adversarial approach distances them from each other when they still want to have a caring, or at least respectful, foundation for their relationship.”)

finding and the open airing of differences when compared to the adversarial system."

Further, feminists heralded mediation because it promised to consider disputes in the language of relationships rather than individual rights.

At first, the organized bar considered divorce mediation inconsistent with the professional ethics that all mediating attorneys, as well as all attorneys, are required to follow. First, they feared that nonattorney mediators would violate "unauthorized practice of law" rules. Second, they were concerned that attorneys would be unable to represent both (necessarily adversary) spouses, and would therefore be involved in conflicts of interest. Because of their extensive training in legal rules as opposed to counseling, lawyer-mediators would be unable to resist giving legal advice. Because divorce in most cases does not raise difficult legal issues, some nonlawyers suspected that the protests of the organized bar were little more than a smoke screen to protect entry into what had been lawyers' sole province.

9. Jessica Pearson et al., The Decision to Mediate: Profiles of Individuals Who Accept and Reject the Opportunity to Mediate Child Custody and Visitation Issues, 6 J. DIVORCE 17, 20 (1982); see also Joyce Hauser-Dann, Divorce Mediation: A Growing Field?, 43 ARBITRATION J. 15, 17 (1988) (discussing that couples divorcing through the adversary process felt that their involvement with the legal process made their relationship with their spouse even more difficult than before, particularly for the men participating in her study); Barbara J. Bautz, Divorce Mediation: For Better or for Worse?, 5 MED. Q. 51, 55-59 (1988); Robert Emery & Joanne A. Jackson, Charlottesville Mediation Project: Mediated and Litigated Child Custody Disputes, 24 MED. Q. 3, 12 (1989) (finding that men were more satisfied with mediation than their spouses).


14. Some lawyers were quite overt about their fears:

[Mediation] would be an outrage as far as I'm concerned. It would ruin our practice. Arbitration and mediation are a blot on the escutcheon. They'll put
There was also concern that no-fault divorce merely shifted conflict to areas other than the divorce itself. As one author wrote recently:

disputes over property and custody are often battlegrounds on which spouses indirectly work through their feelings about the end of marriage. We must ask whether the provision of an explicit mechanism for dealing with marital misconduct in certain instances might better channel and control these impulses.15

Despite their initial objections, attorneys seem to have adjusted to mediation.16 Interestingly, as the attorneys are disarming, feminists in both the United States and Canada are attacking the process. Feminists have raised a number of objections to the use of mediation instead of the adversarial process. Some writers argue that because women, more than men, seek connection through relationships,17 women might systematically fare worse.18 Others argue that women might trade custody for money to avoid litigation because, where custody is concerned, women are more risk averse than their husbands.19 There is also a more general-

us all out of business. As far as I am concerned they ought to destroy all arbitrators and mediators tomorrow.

Kressel & Hochberg, Divorce Attorneys: Assessment of a Topology and Attitudes Towards Legal Reform, 10 J. DIVORCE 1, 10 (1987); see also Stephen J. Bahr et al., An Evaluation of a Trial Mediation Program, 18 Med. Q. 37 (1987); Silberman, supra note 12, at 124 (Lawyers maintain a monopoly on certain tasks by supporting the prohibition of unauthorized practice of law by non-lawyer mediators).


16. This may be because so many attorneys now mediate, see Gaughan, supra note 8; Silberman, supra note 12; Crouch, supra note 11, at 220, or because court congestion has become such an overwhelming problem. See Leonard L. Loeb, Introduction to the Standards of Practice for Family Mediators, 17 Fam. L.Q. 451 (1984). Many state legislatures are now providing at least an explicit mediation alternative. See, e.g., CAL. CIV. CODE § 4607; COLO. REV. STAT. §§ 13-22-301; VA. CODE ANN. § 8.01-581.22 (Michie Supp. 1993); WIS. STAT. § 767.113.


18. Grillo, supra note 17, at 1581 (asserting that women are especially in danger where mediation is mandatory).

19. See, e.g., Jane W. Ellis, Surveying the Terrain: A Review Essay of Divorce Reform at the Crossroads, 44 STAN. L. REV. 471, 475 (1992); Robert F. Cochran, Jr., The Search for Guidance in Determining the Best Interests of the Child at Divorce: Reconciling the
ized fear that husbands will take advantage of their wives' lack of power within the marital relationship.20

Primary Caretaker and Joint Custody Preferences, 20 U. RICH. L. REV. 1 (1985); Mnookin & Kornhauser, supra note 4, at 975; Richard Neely, Barter in the Court: The Hidden Cost of Divorce, NEW REPUBLIC, Feb. 10, 1986, at 13. The problem is compounded by the fact that many states adopted favorable treatment of joint custody at the same time as they embraced no-fault divorce. For criticisms of this change in substantive custody standards, see, e.g., Barbara Bennett Woodhouse, Hatching the Egg: A Child-Centered Perspective on Parents' Rights, 14 CARDOZO L. REV. 1747 (1993); Elizabeth S. Scott, Pluralism, Parental Preference, and Child Custody, 80 CAL. L. REV. 615 (1992); Grillo, supra note 17; Katherine Bartlett, Rethinking Parenthood as an Exclusive Status: The Need for Legal Alternatives when the Premise of the Nuclear Family has Failed, 70 VA. L. REV. 879 (1984).

As this view has become accepted, it has altered the way we articulate and conceive of custody issues. The dominant rhetoric no longer describes divorce as a process that terminates the relationship between spouses, establishing one as the custodial parent with clear responsibilities. Rather, divorce is now described as a process that, through mediation, restructures and re-formulates the spouses' relationship, conferring equal or shared parental rights on both parents although one, in practice, usually assumes the primary responsibility for care of the children. This is an important substantive shift.

Martha Fineman, Dominant Discourse, Professional Language, and Legal Change in Child Custody Decisionmaking, 101 HARV. L. REV. 727, 732 (1988). One study was unable to detect negative financial consequences for women due to the use of mediation. Jessica Pearson & Nancy Thoennes, Divorce Mediation: An Overview of Research Results, 19 COLUM. J.L. & SOC. PROBS. 451 (1985); see also Jessica Pearson, Ten Myths About Family Law, 27 FAM. L.Q. 283-84 (1993) (arguing that it is mythical to think that alternative dispute resolution procedures have eroded the financial status of women); Rosenberg, supra note 17, at 468 ("[A]n overwhelming number of the women and men who have been through mandatory mediation approve of it strongly."); Margaret F. Brining & Michael V. Alexeev, Trading at Divorce: Preferences, Legal Rules and Transaction Costs, 8 OHIO ST. J. ON DISP. RESOL. 279, 292 (1993) (concluding that over the relevant range, trading between money and custody does not seem to be taking place).


The fundamental premise that must be understood in order to analyze the impact of the use of mediation in family law is that women are less powerful than men in this society. Generally women are economically dependent on the men in their families, both during childbearing years and when they are in the work force earning only three-fifths of what their male counterparts can.

Lefcourt, supra note 6, at 267. These fears are characterized as misleading by Rosenberg, supra note 17, at 249. Rosenberg argues that mediation should not be held accountable for numerous "problems" it did not cause, such as the elimination of fault-based divorce and changes in child custody determinations. Rosenberg asserts that whatever problems may exist within the substantive law of child custody, they are separate from a determination of the best process to use for child custody determinations. Id at 471; see also Penelope E. Bryan, Killing Us Softly: Divorce Mediation and the Politics of Power, 40 BUFF. L. REV. 441 (1992). Imbalance is especially problematic where there has been abuse in the family. Lisa G. Lerman, Mediation of Wife Abuse Cases: The Adverse Impact of Informal Dispute Resolution on Women, 7 HARV. WOMEN'S L.J. 57 (1984). But see Joan B.
This paper examines if there is anything inherent in a woman's character that disables her from bargaining effectively in mediation. In other words, the question is whether a woman operates like a man when making choices. Specifically, I test two prominent challenges to women's ability to mediate on par with their husbands: their propensities toward risk aversion and altruism (or communitarianism). These concepts resemble what Robert Mnookin refers to as unequal bargaining power.

In Part I, I discuss how risk preferences might affect bargaining at divorce. I present empirical data that is consistent with theories of innate gender difference. In each case, however, there exists at least one other explanation for the results that cannot be ruled out. In Part II, I discuss the question of whether women are more altruistic than men. Several empirical evaluations of altruism reveal no measurable difference based upon gender.

Overall, I conclude that a divorce mediator must be conscious of power imbalances brought about by the difference in men's and women's earning power and by physical abuse if present in the relationship. Given this awareness, mediation remains a fair, as well as an inexpensive and time-saving, process for marriage dissolution. There is nothing inherent in being a woman that precludes a successful mediation of marital problems.

I. RISK AND GENDER

A. Risk Preferences

Analytically, to be risk averse is to be willing to exchange something of value for reduced risk. Risk aversion may take

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Kelly, *Mediated and Adversarial Divorce: Respondents' Perceptions of Their Processes and Outcomes*, 24 Med. Q. 71, 78 (Table I) (1989) (divorcing wives using mediation are even more satisfied with their ability to stand up for themselves than are their husbands or divorcing women who used the traditional adversary process).

21. See, e.g., Margaret Brinig & Steven Crafton, *Marriage and Opportunism*, 23 J. Legal Stud. 869 (1994) (arguing that there may be problems stemming from the inherent power imbalance caused by women's smaller earnings in the labor market or from abuse in the relationship. This lack of economic power is one of the things that gives the husband the ability to behave opportunistically during the ongoing marriage).


the form of paying a premium to avoid even a very small chance of suffering a catastrophic loss (insurance).  

If women are more risk averse than men, it may explain a number of phenomena. For this paper it is important to consider whether women are more risk averse than men because if women are more risk averse, they should prefer to settle cases rather than litigate given the same probability of a favorable outcome. There are other possible consequences of differential risk aversion. It would explain why, at least historically, women have preferred to marry rather than to remain single. In this respect, marriage resembles insurance: it exchanges the certainty of a mate, even with limitations, for the risk that no male as good as the present suitor might come along. Additionally, it may be risk aversion rather than sex discrimination that explains significant differences in lifetime earnings, for women may be less willing to accept employment that offers greater income variance or to undertake risky investment opportunities.

56 J. Pol. Econ. 279, 286 (1948); see also Ejan Mackaay, Economics of Information and Law 173-74 (1982).


28. Women may prefer marrying early because they are more risk averse. See supra note 19. Because women are unwilling to wait, they might accept a less desirable mate than they would if risk neutral. Since men are by hypothesis more risk neutral, a man who is less desirable than average might be able to marry a woman who is more desirable. Of course, as with all search models, variation occurs within the pools (here of men and women). For more lengthy descriptions of courtship as search behavior, see, e.g., Gary Becker, A Theory of Marriage, in Economics of the Family: Marriage, Children, and Human Capital: A Conference Report of the National Bureau of Economic Research (Theodore W. Schultz, ed., 1974), or the less formal Paula England & George Farkas, Households, Employment and Gender (1986). Marriage also functions as insurance because if one spouse cannot work, the other may provide for both. If one becomes ill or infirm, the other is there to help. K.N. Llewellyn, Behind the Law of Divorce (pt. 1), 32 Colum. L. Rev. 1281, 1290 (1932); Bea Ann Smith, The Partnership Theory of Marriage: A Borrowed Solution Fails, 68 Tex. L. Rev. 689, 694 (1990).

The housewife is an unpaid worker in her husband's house in return for the security of being a permanent employee: hers is the reductio ad absurdum of the case of the employee who accepts a lower wage in return for permanence in his employment.

Modern women, who are working outside the home in a majority of cases, may not need the "insurance" of marriage, and therefore may be more inclined either not to marry in the first place or to divorce.

Germaine Greer, supra note 27, at 239; see, e.g., Allen Parkman, supra note 3; Douglas Allen, supra note 3.

If risk preferences differ by gender, it is easy to demonstrate profound implications for a society in which individual choice plays a central role. Ordinarily, contracts equate differences in individual risk preference at the margin. Each party negotiates until they bear ex ante the desired level of risk. For instance, the party that is risk neutral will bear both the potential gains and losses by shouldering the exposure to the risk. However, as some have argued, relative risk preference may not be conscious; it may stem from biological or environmental factors.

(N.D. Ill. 1986) (concluding that the EEOC had not proven discrimination because women apparently preferred the lower paid salaried jobs to the higher paid commissioned jobs), aff'd, 889 F.2d 302 (7th Cir. 1988). But see Joan Scott, Deconstructing Equality-Versus-Difference: Post Structuralist Theory for Feminism, 14 FEMINIST STUD. 33 (1988) (debunking the idea that women are not equally attracted to more risk-endowed professions than men); Joan C. Williams, Dissolving the Sameness/Difference Debate: A Post-Modern Path Beyond Essentialism in Feminist and Critical Race Theory, 1991 DUKE L.J. 296 (1991); Vicki Schultz, Telling Stories about Women and Work: Judicial Interpretations of Sex Segregation in the Workplace in Title VII Cases Raising the Lack of Interest Argument, 103 HARV. L. REV. 1749, 1808-09 (1990). Possible occupations are ranked in order of riskiness by Friedman and Savage, supra note 25, at 284. They consider occupations involving little or no risk about money return to include school teaching, other civil service employment, and clerical work. Those involving a moderate degree of risk, but unlikely to lead to either extreme gains or extreme losses, are occupations like “dentistry, accountancy, and some kinds of managerial work.” Those involving much risk, with some possibility of extremely large gains and some of extremely large losses, include occupations involving physical risks like piloting aircraft and automobile racing, and “professions like medicine and law, and business undertakings in untried fields.” Id.

30. Of course, risk preference does not explain all sociological differences between men and women. Male aggression does not necessarily transfer into risk-loving behavior, although it might on occasion. It also presumably has little to do with conversational styles, such as those discussed in Deborah Tannen’s provocative book, You Just Don’t Understand Me (1990).


32. Richard Epstein, The Varieties of Self-Interest, 8 SOC. PHIL. & POL’Y 102 (1990) (limiting women’s access to dangerous occupations in order to assure continuation of the human species may be rational).

The marginal rates of substitution differ systematically for males and females. So long as reproduction is the central objective in evolution, we should expect that any trait that is relevant to reproduction will be central to all aspects of the behavior of both sexes. The implication of asymmetrical sex roles is that males should be less risk-averse (or more risk-prefering) than females when each act out of their own self-interest.

Id. at 108. But see International Union v. Johnson Controls, Inc., 499 U.S. 187 (1990) (holding that a battery manufacturing company could not prohibit fertile women from engaging in tasks where a potential fetus might be exposed to dangerous levels of lead). The company had changed its policy from its original one of simply warning female employees of the potential dangers and allowing them to assume the risk to one of protecting the unborn. As Judge Easterbrook said in rejecting the company’s choice in
Thus behavioral differences may not be amenable to political tinkering. To the contrary, relative risk preference may engender "unintended consequences," resulting in the worsening of conditions for women and children. For example, if women are genetically predisposed to risk aversion and society chooses to eliminate alimony to equalize men's and women's incomes, women will not "adapt" to the changed divorce regime by working at higher wages in the labor market, because this would require them to accept uncomfortable levels of risk. After divorce, women would still be disadvantaged relative to their former husbands.

More than a decade has passed since the appearance of Bargaining in the Shadow of the Law: The Case of Divorce. The authors noted that since the emergence of no-fault divorce, bargaining between divorcing spouses occurred in the overwhelming majority of cases. They suggested that this negotiation took place within the framework of the couple's expectations about judicial resolution of their dispute. In other words, neither party would be expected to settle for less than the predicted court outcome. However, they cautioned that if the spouses did not have the same attitudes about risk, the reformed gender-neutral divorce laws might systematically favor one spouse over the other. In particular, if women were more risk averse than their husbands, they might give up some share of the family wealth they other-

the Court of Appeals:
Risk to the next generation is incident to all activity, starting with getting out of bed. (Staying in bed all day has its own hazards). To insist on zero risk, which the court says [the employer] may do, is to exclude women from the industrial jobs that have been a male preserve. By all means let society bend its energies to improving the prospects of those who come after us. Demanding zero risk produces not progress but paralysis. Defining tolerable risk, and seeking to reduce that limit, is more useful—but it is a job for Congress or OSHA in conjunction with medical and other sciences. Laudable though its objective be, [the employer] may not reach its goal at the expense of women.


33. See Brinig & Crafton, supra note 21 (consequences of no-fault divorce).
34. Mnookin & Kornhauser, supra note 4.
35. In economic terms, the expected court outcome was analogous to the "endowment point" of an Edgeworth-Bowley box with axes of custodial time and share of marital wealth, and with the spouse's beginning points for bargaining being their indifference curves that ran through this point. Bargaining takes place within the "lens" shaped by the two indifference curves.
wise would obtain in court in order to avoid the uncertainty that litigation presents.36

Studies have shown that in most cases, women continue to be the primary caretakers of children following divorce.37 Further, many of these new single-head-of-household families have a reduced standard of living following dissolution of the marriage,38 despite the broadening concept of "marital" (as opposed to "separate") property. 39

There has been little empirical testing of Mnookin and Kornhauser's "trading" theory40 that couples trade custody for assets, and therefore most evidence is anecdotal.41 Even if couples do

36. This possibility is acknowledged by Rosenberg, supra note 17, at 501 n.130. Recent family law literature suggests that this type of "trading" does occur. Robert Cochran used it as part of his argument against a gender-neutral "best interests" test for child custody, suggesting that a preference for the primary caretaker would eliminate some of the problem. Cochran, supra note 19, at 30-34. Likewise, Justice Richard Neely of the West Virginia Supreme Court wrote that as a trial lawyer for divorcing men, he would take advantage of his adversary's risk aversion by threatening litigation, even when his client did not really want significant custodial responsibilities. Richard Neely, The Primary Caretaker Parent Rule: Child Custody and the Dynamics of Greed, 3 YALE L. & POL'Y REV. 165, 171-72, 178-79 (1984); see also Elizabeth Scott, supra note 19, at 626-27 (1992).


39. The data is suggestive, but not conclusive, that women are worse off following no-fault divorce than they were under the old fault system. See, e.g., Stephen Sugarman, Dividing Financial Interests on Divorce, in DIVORCE REFORM AT THE CROSSROADS, supra note 37 at 37; Marygold Melli, Constructing a Social Problem: The Post-Divorce Plight of Women and Children, 1986 AM. B. FOUND. RES. J. 759, 769-70 (1986); see also Lenore J. Weitzman, The Economics of Divorce: Social and Economic Consequences of Property, Alimony and Child Support Awards, 28 UCLA L. REV. 1181 (1981) (discussing whether their former husbands in fact enjoy enhanced lifestyles); Lenore J. Weitzman, The Divorce Revolution, supra note 38. The data suggesting the poverty many women with children experience following divorce has not been satisfactorily explained.

40. Mnookin et al., supra note 37; Brinig & Alexeev, supra note 19.

41. See, e.g., Neely, supra note 36.
trade custody for assets, this trading may not necessarily be bad. Economists generally suggest that, all other things being equal, such trading allocates resources, human and financial, to their most highly valued uses. However, if the couple does not share risk preferences, a no-fault system may lead to increased post-contractual opportunism affecting bargaining outcomes.

For many years, modern economics has accepted the proposition that people behave in characteristic ways in the face of risk. The fear of catastrophic losses (hence the purchase of insurance) and the desire to minimize variance in income (hence diversification of investment) are two approaches to dealing with risk. Because people value the first dollar they possess more than the millionth, they fear catastrophic loss even though the likelihood of its occurrence in any individual case is remote. Therefore, many individuals purchase insurance. As insurance salespeople suggest, they “purchase peace of mind.” Further, many individuals, afraid of variance in their fortunes, will “hedge”...

42. Allan Farnsworth, Legal Remedies for Breach of Contract, 70 COLUM. L. REV. 1145, 1145-47 (1970); R.H. Coase, The Problem of Social Cost, 3 J. LAW & ECON. 1 (1960). Women, at least to some extent, actually value time with their children more highly than do their husbands. Margaret F. Brinig & Michael V. Alexeev, Legal Rules, Bargaining, and Transaction Costs: The Case of Divorce, in SYSTEMATIC DISPUTE RESOLUTION 91 (Stuart Nagel & Miriam Mills eds. 1991). If this is true, and if divorcing fathers still view their children’s welfare as important, children ought to end up with enough money through child support to live comfortably. Unfortunately, many noncustodial fathers do not make child support payments faithfully. DAVID CHAMBERS, MAKING FATHERS PAY (1983); Yoram Weiss & Robert Willis, Children as Collective Goods in Divorce Settlements, 3 J. LAB. ECON. 268 (1985). Federal mechanisms to insure more efficient collection have been instituted during the past several years. Child Support Enforcement and Enforcement of Paternity Amendments to Title IV of the Social Security Act, 42 U.S.C. §§ 651-60. Assuming they negotiate, the spouses are dealing ex ante knowing that child support cannot be easily enforced. The wife’s risk aversion reduces the cost of the husband’s acting in bad faith.

43. Brinig & Crafton, supra note 21. One problem, of course, is that divorce bargaining in most families involves third parties, the children of the marriage. Even though divisions may be “fair” from the perspective of the divorcing spouses, the state is unwilling to mortgage the children’s future, either by “awarding” custody to the less successful parent, or by providing the custodial parent with fewer financial resources than are required to do a successful job of parenting. This sort of “unfairness” is not the inequality of bargaining power that used to result in the invalidation of separation agreements. At that time, it was the women’s alleged inexperience in financial and legal affairs that resulted in violation of a confidential relationship or unconscionability.

44. See, e.g., JOHN VON NEUMANN & OSKAR MORGENSTERN, THEORY OF GAMES AND ECONOMIC BEHAVIOR (1944); FRANK H. KNIGHT, RISK, UNCERTAINTY AND PROFIT 198-99 (1920).

45. Friedman & Savage, supra note 25, at 285-86. The difference between expected utility and the utility of expected income explains this behavior.
by investing in a portfolio of assets. Holding a diversified portfolio allows a person to adjust the amount of risk she bears to a level consistent with her risk preferences. Thus, while holding a portfolio will virtually eliminate the possibility of reaping pure profits, it will also minimize the threat of losing everything because of a single unwise investment.

Risk aversion has been characterized as a middle class phenomenon, risk neutrality as belonging to large institutions, such as banks, corporations, and insurers, who can spread risk effectively, and risk preference as belonging to the very poor (who have literally nothing to lose) and the very rich (who by their acceptance of the risk of entrepreneurship may reap great rewards). Contrary to popular belief, there is nothing "wrong" or unhealthy about either risk preference or risk aversion.

If we assume that women are generally more risk averse than men, the difference in attitudes about risk would cut across all classes and groups, affecting significant decisions of each person every day. For example, women may pay more for new cars than their male counterparts not because they know less, but because their greater aversion to risk causes them to fear losing the deal.

In another example, girls might not perform as well on standardized tests as comparably intelligent boys because of their risk aversion. If wrong answers are deducted from the total score, a risk averse girl may leave a question blank, even though she has been able to eliminate two out of the four possible

46. See, e.g., Harry Markowitz, Portfolio Selection, 7 J. Fin. 77 (1952).
47. Id.
50. To a certain extent risk preference may be necessary for biological reasons. Sociobiologists suggest that this behavior, at least for nonhuman animals, may serve both to attract mates and to weed out the less physically able. See, e.g., Edward Wilson, Sociobiology 158-62 (1980); Edward Wilson, On Human Nature 86-87 (1978); Jack Hirshleifer, Evolutionary Models in Economics and Law: Cooperation Versus Conflict Strategies, 4 Res. in Law & Econ. 1, 39-40 (1982). Studies have shown that adolescents, as a group, tend to be less risk averse than younger or older people of similar backgrounds. Charles Lewis & Mary Ann Lewis, Peer Pressure and Risk-Taking Behaviors in Children, 74 Am. J. Pub. Health 580 (1984).
51. But see Ian Ayres, Fair Driving: Gender and Race Discrimination in Retail Car Negotiations, 104 Harv. L. Rev. 817 (1991) (suggesting evidence for demand-side discrimination, but also suggesting that women and blacks may have greater search costs or less information about the market).
choices. A risk neutral boy would choose between the two answers he considers the most plausible, and therefore may earn a higher score. Although boys perform better on standardized tests, a recent study of the American Association of University Women argues that girls do just as well in school. If our assumption is correct, then the results are not entirely a consequence of bias in question content (for example, “sports” questions), but are the result of risk aversion operating through the scoring system.

B. Empirical Testing of Risk Aversion

To test whether women are more risk averse than men, it is necessary to examine several phenomena. One phenomenon concerns behavior in the face of only “positive” or “neutral” states of the world. This involves the question of winning or not winning, without the chance of loss (other than the opportunity cost of time). Another concerns behavior in the face of “negative” states of the world, which means that there is a chance that by engaging in an activity a bad consequence will result. The purchase of insurance manifests this sort of risk aversion. A third concerns more traditional gambling behavior, in which a small sum is paid for a chance of winning a larger prize.

To study the phenomenon resulting from a “positive” state of the world, a simple experiment was conducted. In a random sample, more than three hundred people of different ages were confronted with a game consisting of three jars from which they could try to draw a winning ball. Each subject was told that

52. This is the same conclusion reached in Malcolm Slakter et al., Sex, Grade Level and Risk Taking on Objective Exams, 39 J. Exper. Educ. 65 (1971) (nonsense questions not attempted by girls and older children).


54. Although I have been unable to study this type of risk taking behavior in a systematic way, evidence from the only state lotteries collecting this kind of demographic data suggests that the largest proportion of their clientele is male. IDAHO LOTTERY: ANNUAL REPORT 1990-91 at 23 (showing that 48% of the players are female and 52% of the players are male). The state population is 50% female. Whether this is statistically significant can not be calculated from the information provided. Similar results were reported for the District of Columbia Lottery by Dr. Clem Eyo, January, 1992.

55. Participants ranged in age from four to 62 years old and included all students in an elementary school, several entire classes at a high school, and volunteers from a center for legal and graduate education. All institutions were located in the greater Washington, D.C. area. Obviously the younger participants were not of an age to be married, let alone divorced. However, the results demonstrate that the dramatic change in risk-taking behavior occurs at adolescence. After this time, when people might be involved in mediation, women are consistently more risk averse than are men.
the red jar contained a 90% chance of winning, but the reward was very small. The yellow jar contained a 20% chance of winning, with a slightly larger reward. The blue jar contained only a 5% chance of winning, while the reward was very large. Information was collected about each participant's age, sex, and zip code, as well as the jar chosen. Descriptive statistics follow:

Table I. Statistics on Positive Risk Taking Experiment

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<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>Std. Dev.</th>
<th>Variance</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGE</td>
<td>362</td>
<td>18.243</td>
<td>12.243</td>
<td>149.89</td>
<td>4.00</td>
<td>62.00</td>
</tr>
<tr>
<td>SEX</td>
<td>362</td>
<td>.44013</td>
<td>0.49721</td>
<td>0.24722</td>
<td>0.0000</td>
<td>1.0000</td>
</tr>
<tr>
<td>INCOME</td>
<td>362</td>
<td>249,490</td>
<td>71403</td>
<td>50984</td>
<td>85000</td>
<td>570000</td>
</tr>
</tbody>
</table>

The data was analyzed using the multinomial logit technique. The results follow, with significant coefficients presented in bold face:

56. The zip code was used as a proxy for wealth; however, it is possible that the zip code/wealth measure may have picked up people with non-liquid assets in housing rather than larger income streams.

57. The value for male being 1 and the value for female being 0.

58. Significant to .05. I chose this analytical tool because the dependent variable (choice) was discrete, meaning that it was neither continuous nor binary. Discussions of multinomial logit appear in Peter Kennedy, A Guide to Econometrics 230-31 (1992), and for a more sophisticated discussion see G. S. Maddala, Limited-Dependent and Qualitative Variables in Econometrics 41 (1983).
### Table II. Positive Risk Taking by Age and Sex

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Estimate</th>
<th>Standard Error</th>
<th>T-Statistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yellow</td>
<td>-1.29601</td>
<td>.786015</td>
<td>-1.64883</td>
</tr>
<tr>
<td>SEX (Yellow)</td>
<td>-.656640</td>
<td>.908528</td>
<td>-.722752</td>
</tr>
<tr>
<td>AGE (Yellow)</td>
<td>.077420</td>
<td>.064000</td>
<td>1.20969</td>
</tr>
<tr>
<td>AGE² (Yellow)</td>
<td>-.134425E-02</td>
<td>.137105E-02</td>
<td>-.980453</td>
</tr>
<tr>
<td>SEX*AGE (Yellow)</td>
<td>.073211</td>
<td>.093599</td>
<td>.782184</td>
</tr>
<tr>
<td>SEX*AGE² (Yellow)</td>
<td>-.160732E-02</td>
<td>.195714E-02</td>
<td>-.821260</td>
</tr>
<tr>
<td>INCOME (Yellow)</td>
<td>-.591005E-06</td>
<td>.161654E-05</td>
<td>.365599</td>
</tr>
<tr>
<td>Blue</td>
<td>.128783</td>
<td>.863243</td>
<td>.149185</td>
</tr>
<tr>
<td>SEX (Blue)</td>
<td>-1.18746</td>
<td>.893929</td>
<td>-1.32836</td>
</tr>
<tr>
<td>AGE (Blue)</td>
<td>-.054249</td>
<td>.066402</td>
<td>-.816976</td>
</tr>
<tr>
<td>AGE² (Blue)</td>
<td>.148389E-02</td>
<td>.135548E-02</td>
<td>1.09473</td>
</tr>
<tr>
<td>SEX*AGE (Blue)</td>
<td>.187445</td>
<td>.090133</td>
<td>2.07964</td>
</tr>
<tr>
<td>SEX*AGE² (Blue)</td>
<td>-.389310E-02</td>
<td>.179653E-02</td>
<td>-2.16701</td>
</tr>
<tr>
<td>INCOME (Blue)</td>
<td>-.232022E-05</td>
<td>.199198E-05</td>
<td>-1.16478</td>
</tr>
</tbody>
</table>
The function $dP/dX$ for the various values was derived as follows:\(^\text{69}\)

**Table III. Partial Derivatives of Positive Risk Taking by Age and Sex**

<table>
<thead>
<tr>
<th></th>
<th>RED</th>
<th>YELLOW</th>
<th>BLUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONSTANT</td>
<td>.15739</td>
<td>-0.27667</td>
<td>0.11928</td>
</tr>
<tr>
<td>SEX</td>
<td>2.21510</td>
<td>-0.047537</td>
<td>-0.16756</td>
</tr>
<tr>
<td>AGE</td>
<td>-0.00043712</td>
<td>0.019970</td>
<td>-0.015599</td>
</tr>
<tr>
<td>AGE(^2)</td>
<td>0.000017337</td>
<td>-0.00038682</td>
<td>0.00036948</td>
</tr>
<tr>
<td>SEXAGE</td>
<td>-0.029931</td>
<td>0.0012291</td>
<td>0.028702</td>
</tr>
<tr>
<td>INCOME</td>
<td>0.00063312</td>
<td>-0.000043413</td>
<td>-0.00058970</td>
</tr>
<tr>
<td>SEXAGE(^2)</td>
<td>1.72593D-07</td>
<td>2.93402d-07</td>
<td>-4.65997D-07</td>
</tr>
</tbody>
</table>

Plotting the average values of the derivative from the choice of the most risky jar, Blue, with respect to sex, revealed the curve displayed below.\(^\text{60}\)

**Figure 1. Plot of Differential Risk Taking.**

*Probability of Choosing Blue*

By Age and Sex

This study shows that, although gender alone is not significant in itself for predicting which jar people will choose, when

\(^{69}\) See Maddala, * supra* note 58, at 23. Maddala thoroughly explains how the probability is derived. *Id* at 35. The choice of red was normalized to zero.

\(^{60}\) The equation for the expression $dP/d\text{SEX} = -1.6756 + 0.0287 \text{ AGE} -0.0005897 \text{ AGE}^2$. The graph is for the plot of the derivative at the values of the independent variables, including the coefficient on sex, which is not significant.
combined with age it becomes a significant predictor of risk-taking behavior.\textsuperscript{61} As Figure 1 demonstrates, men will choose the highest risk situation beginning in adolescence. After about age forty, the parties' risk preferences again cross, with women preferring risk more than men do. Above the line at zero, men prefer risk more than women do. Below the line, it is women who choose the riskier gamble. The "zero" point is reached at about age 11, the onset of adolescence. The difference in risk taking propensities reaches its height at about age 30. The tendencies for men and women are the same again at about age 45. The vast majority of couples divorce between ages 25 and 45.\textsuperscript{62} Translated into the family law context, the behavior in this study demonstrates that during the period of likely mediation, men will prefer risk more than their wives will.

The study above involved "positive" risk taking, meaning that there was no chance of loss. However, very few "games" involve no possible loss, and clearly mediation involves losses as well as gains. Therefore, it is important to study the effect of possible loss on risk taking. Another analysis examined speeding convictions for a single month in Fairfax County, Virginia.\textsuperscript{63} Information was collected on the code violation,\textsuperscript{64} age, sex, and zip code.\textsuperscript{65} Over four thousand convictions were analyzed, using fine\textsuperscript{\textdagger}0 for tickets for 0-10 miles over the speed limit, fine\textsuperscript{\textdagger}1 for tickets for traveling 10-15 miles over the speed limit, fine\textsuperscript{\textdagger}2 for tickets for traveling 15-20 miles over the speed limit, and so forth up to fine\textsuperscript{\textdagger}7 for traveling 45 or more miles over the speed limit. The outcomes of a multinomial logit analysis follow as Table IV,\textsuperscript{66} with significant coefficients presented in bold face:

\begin{table}
\centering
\begin{tabular}{|c|c|c|c|c|c|c|c|c|c|}
\hline
\textbf{Code Violation} & \textbf{Age} & \textbf{Sex} & \textbf{Zip Code} & \textbf{Fine} & \textbf{Outcome} \\
\hline
\end{tabular}
\end{table}

\textsuperscript{61} The curve of the graph is consistent with the sociobiologists' hypothesis that men are relatively more risk loving during the period in which they are trying to attract mates, while women tend to be more risk averse during their childbearing years. See, e.g., EDWARD WILSON, SOCIOBIOLOGY 158-62 (1980); EDWARD WILSON, ON HUMAN NATURE 86-87, 124 (1978); Jack Hirshleifer, Evolutionary Models in Economics and Law, 4 RES. IN L. & ECON. 1, 39-40 & nn. 48-49 (1982) (explaining ways of resolving rivalry among men for the attention of women).

\textsuperscript{62} Margaret F. Brinig & Douglas W. Allen, Sex, Property Rights, and Divorce (May 1995) (on file with author).

\textsuperscript{63} The original number of convictions was 5582. Observations were omitted for drivers from outside the Washington, D.C. area (for whom wealth data could not be collected) and for those convicted of reckless driving. This resulted in 4374 usable observations.

\textsuperscript{64} The code violation involved the number of miles over the speed limit at a given speed.

\textsuperscript{65} See note 66.

\textsuperscript{66} Speeds 5-10 m.p.h. were normalized to zero. Again, Males were represented as sex=1, Females as sex=0.
### Table IV. Logit Analysis of Speeding Tickets by Age, Sex and Income

| Speed | Variable | Coefficient | Std. Error | T-ratio | Prob (>|X|) | Mean of X | St. Dev. of X |
|-------|----------|-------------|------------|---------|-------------|-----------|---------------|
| 0-15  | AGE      | 0.0051641   | 0.0034879  | 14.806  | 0.0000      | 32.999    | 11.436        |
|       | SEX      | -0.0135651  | 0.0103679  | -1.308  | ~1.9075     | 0.63306   | 0.53209       |
|       | INCOME   | 0.94E-08    | 0.474E-07  | 0.199   | 0.84212     | 0.23E+06  | 0.10E+06      |
| 20-25 | AGE      | 0.014784    | 0.0004564  | 22.957  | 0.0000      | 32.999    | 11.436        |
|       | SEX      | 0.098035    | 0.0135680  | 6.692   | 0.0000      | 0.63306   | 0.53209       |
|       | INCOME   | 0.853E-06   | 0.620E-07  | 13.753  | 0.0000      | 0.23E+06  | 0.10E+06      |
| 25-30 | AGE      | 0.0007516   | 0.002723   | 2.76    | 0.00578     | 32.999    | 11.436        |
|       | SEX      | 0.0088315   | 0.0080954  | 1.091   | 0.27531     | 0.66306   | 0.53209       |
|       | INCOME   | 0.261E-06   | 0.370E-07  | 7.045   | 0.0000      | 0.23E+06  | 0.10E+06      |
| 30-35 | AGE      | -0.000432   | 0.0001956  | -2.206  | 0.02739     | 32.999    | 11.436        |
|       | SEX      | 0.0423266   | 0.0058149  | 7.279   | 0.0000      | 0.63306   | 0.53209       |
|       | INCOME   | 0.135E-06   | 0.266E-07  | 5.087   | 0.0000      | 0.23E+06  | 0.10E+06      |
| 35-40 | AGE      | -0.000164   | 0.0001446  | 1.135   | 0.25642     | 32.999    | 11.436        |
|       | SEX      | 0.0149346   | 0.0004299  | 3.474   | 0.00051     | 0.63306   | 0.53209       |
|       | INCOME   | 0.828E-07   | 0.196E-07  | 4.215   | 0.0002      | 0.23E+06  | 0.10E+06      |
| 40-45 | AGE      | 0.864E-05   | 0.548E-04  | 0.168   | 0.86661     | 32.999    | 11.436        |
|       | SEX      | -0.005027   | 0.0015293  | 3.287   | 0.00101     | 0.63306   | 0.53209       |
|       | INCOME   | 0.233E-07   | 0.699E-08  | 3.335   | 0.00085     | 0.23E+06  | 0.10E+06      |
| over 45| AGE    | 0.19E-05    | 0.138E-04  | 0.138   | 0.89037     | 32.999    | 11.436        |
|       | SEX      | -0.000293   | 0.0004099  | 0.715   | 0.4475      | 0.63306   | 0.53209       |
|       | INCOME   | 0.10E-08    | 0.18E-08   | 0.575   | 0.56558     | 0.23E+06  | 0.10E+06      |
Assuming, in the absence of specific data in either direction, that women are convicted of speeding in the same proportions as men, and also that approximately the same amount of speeding behavior exists for each case resulting in a conviction, this study shows that for the most part, men tend to speed more excessively than women do. Of the seven levels, men were convicted of speeding significantly more often than women in three of the levels. Women's convictions exceeded men's significantly in only one instance. Since we have attempted to hold age and wealth constant, it appears that men are unwilling to risk being caught and convicted of speeding almost as much as women.

C. Other Ramifications of Differential Risk Aversion

Standardized tests provide both a test of the risk taking behavior explored already and an example of how differences in attitudes about risk explain everyday phenomena. If girls are more risk averse than boys, they will score lower than boys on standardized

<table>
<thead>
<tr>
<th>Type of conviction</th>
<th>Females</th>
<th>Males</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-radar, 1-9 m.p.h. over limit</td>
<td>10</td>
<td>28</td>
</tr>
<tr>
<td>Non-radar, 10-14 m.p.h. over</td>
<td>142</td>
<td>320</td>
</tr>
<tr>
<td>Non-radar, 15-19 m.p.h. over</td>
<td>198</td>
<td>516</td>
</tr>
<tr>
<td>Non-radar, over 20 m.p.h. over</td>
<td>63</td>
<td>237</td>
</tr>
<tr>
<td>Radar, 1-9 m.p.h. over limit</td>
<td>17</td>
<td>22</td>
</tr>
<tr>
<td>Radar, 10-14 m.p.h. over limit</td>
<td>3179</td>
<td>3929</td>
</tr>
<tr>
<td>Radar, 15-19 m.p.h. over limit</td>
<td>2606</td>
<td>3942</td>
</tr>
<tr>
<td>Radar, over 20 m.p.h. over</td>
<td>471</td>
<td>982</td>
</tr>
</tbody>
</table>

67. It could be that men tend to be arrested on a more frequent basis than are women, cf. Craig v. Boren, 429 U.S. 190, 200-01 (1976) (citing statistics which showed male arrests for driving under the influence and drunkenness substantially outnumbered female arrests), but there is no data to show this. Data for Nov. 1, 1990 - Oct. 31, 1991, from Michele Nunneville, Arlington County Clerk's Office also shows males are arrested more frequently, with the results being more apparent as the degree of speeding increases. Data from Arlington County, Virginia, shows the same results for citations based upon radar as for arrests after observation. These results are illustrated in Table V:

68. This was at 40-45 m.p.h. over the speed limit. At that speed and higher, one possible explanation for women's conviction rates being higher is that men were being convicted for other offenses such as reckless driving, which are quasi criminal. Men had 161 tickets for "reckless" offenses as opposed to simple speeding; women had 80. Additionally, the results may be unreliable given that the number of observations at these speeds was very small, only 13 out of 4374 total convictions.
tests. This will occur because girls can be expected to answer fewer items than their male counterparts. Given a situation in which they are uncertain of which of two or three choices is correct, boys will be more apt to guess while girls will leave the question unanswered. Girls should therefore have: (1) scores on the standardized portions of tests that are lower than on the written portions, (2) more questions omitted than boys, and (3) lower total scores than boys. In fact, all three of these phenomena occur, as demonstrated in the various studies discussed below.

Gansk and Associates perform regular analyses of the California Bar Examination. The exam is composed of two parts, the Multi-state Bar Examination (MBE), a 200-item multiple choice test, and a Written Examination, composed of six essay questions and two Performance Test (PT) problems. The weighted results for the July 1990 examination show that females score significantly lower than their male counterparts on the standardized portion of the examination, but outscore men on the written examination. Because of the way the scores are weighted, with greater weight given to the written examination, women outperform men in total scores.

Meta-analysis revealed that 51% of males outperformed females on various mathematics tests. Although there was a slight female

69. The fact that traditional predictors underpredict girls' college grade point averages has been established in numerous studies. A fairly recent article, Robert McCormack & Mary McLeod, Gender Bias in the Prediction of College Course Performance, 25 J. Educ. Measurement 821 (1988) finds that if adjustments are made for gender differences, averages are predicted more reliably than individual course grades. Id. McCormack and McLeod's study contains citations and discussions of much of the relevant literature.

70. I have no scientific method to address the question of context bias, but simply note that some of the differences in test results are apparently explained by differential risk aversion.

71. Here, questions omitted refer to questions scattered throughout the exam that are left unanswered. If girls omitted only questions at the end of the examination, what we might be observing is a greater degree of care taken by the girls or a lack of budgeting of examination time.

72. STEPHEN P. KLEIN & ROGER BOLUS, ANALYSIS OF THE JULY 1990 EXAM (1990). In California, the total scale score was computed by the following formula: Total Scale Score = (.35)(MBE Scale) + (.65)(Essay Scale).

73. Dr. Klein assured me that “this pattern is very typical of what we find.” Letter from Dr. Stephen Klein, to Margaret Brinig, Professor of Law, George Mason University (May 1992) (on file with author).

74. Janet S. Hyde et al., Gender Differences in Mathematics Performance: A Meta-Analysis, 107(2) Psych. Bull. 139-55 (1990). Meta-analysis is a technique that aggregates the findings of numerous smaller studies, regardless of the number of variables in each or of differences in other test conditions. The SAT was eliminated from most of the testing because “the enormity of sample size” overwhelmed other results. The authors reported a considerably larger gender difference for the SAT than they found in their overall meta-analysis. The 1985 scores analyzed show a male mean of 499 and a female
superiority in performance in the elementary and middle school years, a moderate male superiority emerged in the high school years (= 0.29) and continued in the college years (= 0.41), as well as in adulthood (=0.59). This result is important for mediation, which focuses on post-secondary school risk-taking, and confirms the results of my experiment.

There should be a more significant difference in test scores on the SAT, where the directions specify that the correct answers are counted, but a fraction of a point is subtracted for each incorrect answer. The difference emerges because girls who are unsure of an answer will be less inclined to guess than their male counterparts. The differences are significant, even though the same students perform as well as males in college-level mathematics courses.

Although the College Board performs many studies on the SAT, two are of interest for this paper. One involves "Sex Differences in the Performance of High-Scoring Examinees on the SAT-M (Math)." Here the tests of those scoring at or above 650 on the SAT-M in May 1987 or November 1987, and at or above 660 in May 1988, were analyzed.

The study found that:

Contrary to previous reports, there was no indication that item content or format influenced differential performance. The pri-

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mean of 452. Id. at 150. The authors explained the difference by noting that gender differences are more pronounced as the sample becomes more selective, and because "there may be features of the content of the test itself or of its administration that enlarge the difference between males and females." Id.

75. Id. at 149.

76. The fraction deducted for wrong answers is one-fourth, according to THE COLLEGE BOARD, ATP GUIDE 1991-92 FOR HIGH SCHOOLS AND COLLEGES 18 (1991). The same tendency should be found on the PSAT, taken by juniors to determine eligibility for National Merit Scholarships. This test also has wider ramifications, as students who are National Merit semi-finalists gain an advantage over their peers who have similar grade point averages. More subtly, the number of National Merit finalists produced by schools is considered by parents in deciding where to move, or which high school to select for their children.

77. An American Association of University Women report states that there is about a 50 point difference. AM. ASSOC. OF UNIV. WOMEN, supra note 53, at 54. The difference on the 1985 test was 47 points.


79. Id.

80. This resulted in 18,683 males and 7577 females for May, 1987; 24,984 males and 12,157 females for November, 1987; and 19,145 males and 7560 females for May, 1988. Id. at 2-3. Obviously, males outnumber the females in each test by at least a ratio of 2 to 1.
mary content of four of the five items on which females outperformed males was geometry (which has previously been shown to favor males). Items favoring males were evenly distributed across algebra and geometry. Finally, only 3 of the 18 flagged items were word problems (a format variable previously found to favor males).81

Further, "the percentage of females omitting or not reaching any item is consistently greater than the percentage of males omitting or not reaching that same item. Across all three forms, there are no items where males omitted at a greater rate than females."82 The author of the study, with no supporting evidence, attributed this difference to "females' lower confidence in their mathematical ability. Females may omit these items more frequently than males because they cannot solve them in the allotted time using a standard algorithm and they do not have enough confidence in their mathematical 'intuition' to make an educated guess."83

One study by the College Board, "Differential Speededness and Item Omit Patterns on the SAT," reveals that females omit items more frequently than males and the difference in omissions showed up most frequently in less difficult questions.84 This study examined the SAT in 1984 and 1985. However, there appeared to be little consistent evidence that women performed less speedily than men.85

Finally, in Sharif by Salahuddin v. New York State Education Department,86 girls successfully sought an injunction against the use of the SAT in awarding Regents scholarships. Although the girls did at least as well as boys in college, the standardized tests overwhelmingly identified males as scholarship winners. Use of the test was found to violate the equal protection clause.87 Yet as our results show, much of the difference may be the result of relative risk aversion, rather than discrimination.

Like standardized test results, the choice of whether to purchase insurance illustrates how differences in attitudes about risk explain everyday phenomenon. My research and the literature on risk

81. Id. at 4.
82. Id. at 7.
83. Id. at 9.
85. Id. at 18.
87. Id. at 364.
aversion would predict that, *ceteris paribus*, women would purchase more insurance than men. However, empirical confirmation is sparse. I have not found a source that presents data in a form that permits meaningful analysis. In addition, because life insurance does not benefit the insured, except in a “peace of mind” sense, but benefits her survivors,\(^88\) it is difficult to separate the policy holder’s and the beneficiaries’ concern for risk. Moreover, insurance data do not allow the researcher to separate insurance purchases from insurance provided by employers. Nonetheless, what we have been able to locate is not inconsistent with our predictions.

*The Buyer Study: A Market Study of New Insureds and the Ordinary Life Insurance Purchased*\(^89\) contains information grouped by gender, income, age, and marital status. The tabulated information is presented separately for each of these groupings. What would be most useful for purposes of testing the hypothesis proposed in this paper would be an analysis using all these variables. For example, we know that men and women can be compared in the aggregate by income level. The results follow:

**Table VI. Insurance Policies by Sex**

<table>
<thead>
<tr>
<th>Income of Employed Insured</th>
<th>Average Size Policy: Men</th>
<th>Average Size Policy: Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>$100,000 and over</td>
<td>$360,870</td>
<td>$225,880</td>
</tr>
<tr>
<td>$75,000 - $99,000</td>
<td>$231,560</td>
<td>$264,250</td>
</tr>
<tr>
<td>50,000 - $74,999</td>
<td>$180,140</td>
<td>$137,820</td>
</tr>
<tr>
<td>40,000 - $49,999</td>
<td>$117,880</td>
<td>$112,860</td>
</tr>
<tr>
<td>30,000 - $39,999</td>
<td>$97,620</td>
<td>$84,830</td>
</tr>
<tr>
<td>20,000 - $29,999</td>
<td>$81,620</td>
<td>$69,200</td>
</tr>
<tr>
<td>10,000 - $19,999</td>
<td>$64,110</td>
<td>$53,360</td>
</tr>
<tr>
<td>under 10,000</td>
<td>$59,950</td>
<td>$47,450</td>
</tr>
<tr>
<td>Average</td>
<td>$138,570</td>
<td>$78,380</td>
</tr>
</tbody>
</table>

---

88. As an old Burma Shave sign read, “Although insured, remember kiddo, the one they pay will be your widow.”

The evidence above suggests that women are less risk averse when it comes to the purchase of life insurance because at nearly all income levels women purchased less insurance than men. However, this is not necessarily true. Only 4% of the women compared to 8% of the men were self-employed. Fifteen percent of the women, while 26% of the men, were manager-administrators. Two percent of the women, and 5% of the men were business owners. Men in these three categories purchased 43% of the policies, while women in these three categories purchased only 23%. These business owners would be those most likely to require "key employee" insurance because of their importance to the business. In addition, there is no indication how many of the women studied represented second wage earners within their families. There was no category for "married—only source of income" or "single" subdivided by income and gender. Finally, we do not know the age of each person purchasing a policy. We do know that younger women seem to be purchasing insurance at a higher rate than men; 50% of the women in the study were less than 40 years old, while only 46% of the men were. This difference exists despite the fact that it is women who have a longer life expectancy, and therefore is consistent with my finding that women are actually more risk averse.

C. Risk-Taking and Entrepreneurship

Frank Knight, in his classic *Risk, Uncertainty and Profit*, 90 discusses the difference between risk and uncertainty. Risk is something that can be insured against—although several things might happen, the options are known and the probabilities within which each are likely to occur are also known. With uncertainty, however, there might be unknown options and the probability of occurrence or distribution function is unknown. 91 Knight justifies the capitalist's retaining a firm's earnings on the ground that only the entrepreneur is dealing with uncertainty; other employees of the corporation have fixed claims and will get paid regardless of whether the firm is successful. The bank or other lending institution can compensate for the variance in a business' likely success by charging higher interest rates. The entrepreneur in this sense is not risk averse.92

90. FRANK H. KNIGHT, RISK, UNCERTAINTY AND PROFIT (1985).
91. Friedman & Savage, supra note 25, at 289.
If the analysis is correct, one probable outcome is that women are less likely than similarly situated men to become entrepreneurs rather than employees.\textsuperscript{93} Women graduating from Harvard Business School are more likely than their male classmates to seek employment rather than to become entrepreneurs.\textsuperscript{94}

The Title VII case \textit{EEOC v. Sears}\textsuperscript{95} was viewed by some feminists as a defeat because it requires plaintiffs to show that they were interested in commissioned sales work as well as show that females were underrepresented in these jobs.\textsuperscript{96} While I certainly would not advocate unlawful discrimination on the part of Sears or any other employer,\textsuperscript{97} it is interesting to note that the apparent "lack of interest" in commissioned sales jobs demonstrated by Sears is consistent with women generally being more risk averse than men.\textsuperscript{98} Salaried sales positions offer a certain stream of income whereas commissioned sales do not. Even though salaried sales personnel earn less on average than commissioned workers\textsuperscript{99} it is predictable that the risk averse applicant might well choose the "sure thing."\textsuperscript{100}

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\textsuperscript{93} This is also consistent with the real business cycle literature on "employment lotteries." \textit{See} P.T. Geary \& J. Kennan, \textit{The Employment-Real Wage Relationship: An International Study}, 90 J. Pol. Econ. 854 (1982).


\textsuperscript{95} 628 F. Supp. 1264 (N.D. Ill. 1986).

\textsuperscript{96} Joan Williams, \textit{Deconstructing Gender}, 87 Mich. L. Rev., 777, 819 \& n.87 (arguing that by not requiring Sears to provide equivalent proof of the specific percentage of women who fit gender stereotypes, the opinion established a legal presumption that all women fit traditional stereotypes).

\textsuperscript{97} Indeed, I agree with Williams that as a matter of strict statutory construction, Title VII requires accommodation of specific women who do not fit gender stereotypes. \textit{See} International Union \textit{v. Johnson Controls}, 886 F.2d 871, 920 (1988) (Easterbrook, J. dissenting) ("Title VII requires employers to evaluate applicants and employees as individuals rather than as members of a group defined by sex.").

\textsuperscript{98} Differential risk aversion would probably not have made much of a difference under the facts of \textit{Sears}, 628 F. Supp. 1264, where the reason for the difference in the desire for commissioned sales position was not central to the outcome.


\textsuperscript{100} Of course, it is entirely possible that more than one set of factors is operating here, for example, that women are both risk averse and more inclined to choose family values.
The fact that women are more risk averse than men also supports Carol Rose's theory about why women accumulate less property.\(^{101}\) Rose postulates that women accumulate less because they are less interested in speculating as to increases and decreases in value than men similarly situated. Recently, two female economists at Colorado State University, Nancy Jiankoplos and Alexandra Bernasek, have looked at insurance and security purchase behavior primarily as reported on surveys, and have found mixed indications of risk aversion.\(^{102}\) Women said they were risk averse more often than did men, but did not own fewer risky assets nor more insurance.

If these quite consistent findings from more neutral areas translate into the mediation context, women in fact could be systematically disadvantaged when given a mediation alternative.

**D. Risk-Taking and Law Study**

In November 1993, the front pages of national newspapers contained a story about gender discrimination at the University of Pennsylvania Law School.\(^{103}\) The news story was based on law professor Lani Guinier's work with several coauthors who surveyed past and present Pennsylvania law students about their classroom experiences.\(^{104}\) In addition, the article featured empirical work on the grading at that Ivy League school.\(^{105}\) Despite slightly better entering credentials, women earned substantially lower grades, particularly in the large first year classes upon which law review membership hinges,\(^{106}\) affecting federal clerkships and large firm hiring in turn.

Many of us in law teaching examined our own experiences and consciences after reading this provocative piece. A number of teachers I have talked to from schools around the country report that they have noticed similar, if not identical, phenomena. Women do not tend to participate as often nor as actively as men,

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\(^{105}\) Id. at 21-26.

\(^{106}\) Id. at 27-28.
particularly in large first year courses, and particularly in those taught by men. Nor are women's grades as good.

The women at my law school, who have talked to me in fairly substantial numbers, report things very similar to Guinier's: a feeling of being intimidated and somehow degraded in their first year classes. They suggest an "outside-ness:" an exclusion not just by off-color jokes or sports references but by insensitivity to differences in thought patterns. They found that they underperformed in classes for which classroom participation was graded, while doing much better than their male classmates in seminars or other courses requiring substantial written work.

How does this difference in performance relate to risk aversion? If women, more than men, are uncomfortable with uncertainty because they are inherently more risk averse, they will be less inclined to volunteer unless they are certain of answers. Hearing a variety of answers from colleagues, none of which are pronounced "right," will be more unsettling to the risk averse than to those who are risk neutral. In other words, the Socratic method itself, especially as practiced in large classrooms and with male instructors, may make it hard for at least some women to learn.

II. THE WOMAN AS ALTRUIST

A. Altruistic behavior and its consequences for divorce

Altruism in its simplest form is care for another. The altruist and the other, as defined by the economist, have interdependent utility functions, so that the altruist is willing to reduce her own consumption to increase the consumption of others. The altruist takes the other's utility or happiness into account, so that the other's utility is an extension of the altruist's own. Sometimes this provides the altruist with a kind of pleasure; at other times, the altruist acts out of a sense of duty. "[H]elping or giving out of love is instrumental behavior, that is, concerned with outcomes. If I help my child, I seek the best means to make

that child happy.... The concept of duty is more ambiguous: it can be instrumental or squarely noninstrumental." Milton Regan, in his recent book, writes that the altruist perceives the self as part of a common humanity, as a relational self.

Carol Gilligan, perhaps the best known relational feminist, reports that women consistently tend to describe themselves in terms of the relationships in which they are or have been involved. Women operate with an "ethic of care," looking at each course of action in terms of its potential to strengthen or fracture current relationships. Women might seem to be altruistic when they actually are being victimized.

As Wanda Weigers writes,

I am not suggesting that men as individuals are incapable of altruism or have never been altruistic, nor that women's happiness is not intimately connected to the happiness of others. However, men have never been expected to adhere to a morality of self-sacrifice simply on account of their gender. For some women, by contrast, self-sacrifice or self-denial remains a 'way of life' and a 'consistent duty.'

Work outside the home is therefore viewed by women, but not men, as a choice between work and family. Women's personalities are characterized by sharing, communitarianism, and

111. Id. at 46. As economist Alfred Marshall wrote many years ago, "Men labor and save chiefly for the sake of their families and not for themselves." ALFRED MARSHALL, PRINCIPLES OF ECONOMICS 228 (1920).
112. REGAN, supra note 15; at 114; see also Christopher Jencks, Varieties of Altruism, in BEYOND SELF-INTEREST, supra note 111, at 53, 54.
113. CAROL GILLIGAN, IN A DIFFERENT VOICE: PSYCHOLOGICAL THEORY AND WOMEN'S DEVELOPMENT 189 (1982); see also Robin West, Jurisprudence and Gender, 55 U. CHI. L. REV. 1 (1988); Grillo, supra note 17, at 1601.
114. GILLIGAN, supra note 114, at 30, 166-60.
116. Id.
If wives are significantly more altruistic, they would be disadvantaged when they bargain with their husbands because they would be self-compelled to maintain some marital connections even after separation and even to their own detriment.

Some altruism in a divorcing couple is a good thing. To the degree that a continuing relationship is needed following divorce, values of trust and empathy are probably necessary ingredients. Sometimes former spouses must make sacrifices that assist the family. The problem is that if the wife is willing to make concessions to benefit the divorcing family, while the husband is not, bargaining becomes inherently unfair.

B. Some Tests of Altruism

Using the experiments of Robin Dawes and others as a model, I devised a simple test to determine whether women are more


122. Grillo, supra note 17, at 1550; see also Nancy Chodorow, The Reproduction of Mothering, 176-80 (1978); Gilligan, supra note 114, at 64-105. Rosenberg, supra note 17, at 493, argues that the parent who is "stronger" would be likely to do better in non-mediated settlements, and, indeed, during the entire marriage. After divorce, there will be competition among men for the most desirable women. Although single women may be preferred, some divorced men marry divorced women. Presumably altruism is a desirable characteristic in a future mate, especially when one has experienced divorce. Id.

123. Jencks, supra note 113, at 61-62 (suggesting that reciprocal altruism, in which one person helps another and is helped in turn, depends upon trust, which in turn depends to some extent on empathy); see also Robert Axelrod, The Evolution of Cooperation (1984); R.L. Trivers, The Evolution of Reciprocal Altruism, 46 Q. Rev. Bio. 35 (1971). Some sort of tit-for-tat strategy is probably effective in the child support and visitation context. See Anatol Rapoport & A.M. Charnah, Prisoner's Dilemma (1965) (cooperation on the part of one individual enhances the probability that others will cooperate later in that same situation or a similar one). Similarly, as the proportion of the population that is honest grows, it becomes more probable that a given individual is trustworthy, therefore the expected value of interacting with him or her rises. Frank, supra note 22, at 597.

124. Robyn M. Dawes et al., Cooperation for the Benefit of Us-Not Me, or My Conscience, in Beyond Self Interest, supra note 111, at 97.

125. See Trivers, supra note 124, at 36 (referring to the failure to reciprocate as threatening behavior).

126. Dawes et. al., supra note 125, at 101-03. This study found that if people in the group were allowed to discuss their future choices, they might make "deals" for splitting the prizes once the entire group "won" the larger prize. The element of risk, and thus altruism, was diminished by the discussion. The subjects in our experiment were not allowed to discuss their plans. There might be some difference in results based upon gender-different preferences for chocolate. I have no data to suggest this. For people who chose a small non-chocolate prize, the results were consistent with the chocolate prize group.
willing to give than are men. A sample of 255 people ranging in age from five to 66 years was divided into groups of five. All members of each group were about the same age, with no member more than two years older or younger than any other in the group. Each participant indicated age, sex, and zip code.\textsuperscript{127} The participants were given five Hershey's Kisses\textsuperscript{®} each. They were told that if three people in their group would contribute their five Hershey's Kisses,\textsuperscript{®} everyone in the group would receive ten more. Thus, if three contributed, they would receive ten Hershey's Kisses,\textsuperscript{®} and the others would receive fifteen. If less than a majority contributed, those who had contributed would lose their five Hershey's Kisses\textsuperscript{®} while the others in the group kept their original five. Those choosing to contribute were the altruists, since they could in no event do as well as those who kept their own Hershey's Kisses.\textsuperscript{®} However, their contribution increased the probability of a larger reward for the other members of the group. The results of a probit regression\textsuperscript{128} using the choice of contributing as the dependent variable are shown in Table VII:

Table VII. Preferences for Altruism on Behalf of a Group.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Standard Error</th>
<th>T-ratio</th>
<th>Probit\textsubscript{x}</th>
<th>Mean of X</th>
<th>Std. of X</th>
</tr>
</thead>
<tbody>
<tr>
<td>AGE</td>
<td>.293138E-01</td>
<td>.502634E-02</td>
<td>5.832</td>
<td>0.0000</td>
<td>18.941</td>
<td>11.195</td>
</tr>
<tr>
<td>SEX</td>
<td>-.14587</td>
<td>.152909</td>
<td>-.954</td>
<td>.34018</td>
<td>.45098</td>
<td>.49857</td>
</tr>
</tbody>
</table>

What the table demonstrates is that age is significantly related to altruism: as the experimental subject's age increased, so did the probability of choosing to contribute to the group. However, gender did not predict altruism in this pure sense, although the negative sign indicates that women were slightly more willing to contribute, controlling for age.

\textsuperscript{127} See \textit{supra} note 56.

\textsuperscript{128} The regression was performed using the statistical package LIMDEP. Probit analysis was chosen since the dependent variable was a dummy having the value of 1 for contribution or 0 for no contribution. The Chi-Squared for the equation was 21.058, showing that the results in all probability did not happen by chance.
People who give money to charities are also altruistic. Although I did not have access to raw data and could not run regressions, I was able to obtain national statistics on charitable giving broken down by marital status, sex and income level. I was particularly interested in contributions by single women as compared to those of single men. Women heads-of-household give a total of 1.6% of their income to charities, while men heads-of-household give 1.8%. The income levels of people in this study were $38,688 for men and $35,075 for women. The popular press indicates that women give at least as frequently as men. However, the size of gifts given at every income level is higher for men than women.

A more recent test of altruism demonstrated that in a number of prisoner's dilemma experiments performed by undergraduate economics students, "where subjects may choose to split a larger pie with a 'bad' partner, or a smaller pie with a 'good' partner," women were less likely to make decisions on principle, but were more responsive to changes in the parameters of the decision making environment. In playing ultimatum games, "in which two players split a fixed amount of money according to specific bargaining rules," there were no real gender differences in the proposals made. However, as respondents, men expected more generous offers to be made to them, while women did not seem to expect more generous proposals from others.

These two attempts to empirically verify differences in altruism are not exhaustive, but suggest avenues for future research.

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129. They may not be "purely" altruistic though, see James Andreoni, Giving with Impure Altruism: Applications to Charity and Ricardian Equivalence, 97 J. Pol. Econ. 1447 (1989).

130. INDEPENDENT SECTOR, GIVING AND VOLUNTEERING IN THE UNITED STATES (1992).

131. Charitable giving by single people eliminates the possibility that they give at least in part from a spouse's income rather than their own.

132. INDEPENDENT SECTOR, supra note 131, at 54, 69 Tables 1.18, 2.1.

133. Why Can't a Woman Give Like a Man? WORKING WOMAN 70 (Nov. 1992).


135. Id.

136. Catherine C. Eckel & Phillip Grossman, Chivalry and Solidarity in Ultimatum Games (Virginia Polytechnic Institute and State University, Working Paper, 1994). The ultimatum game is one in which students divide money. The first is given a sum of money, say $1.00, which she can divide between herself and the other player in any way she desires. The other player can choose whether to accept the proffered amount or reject it, in which case neither gets any.

137. Id.
Two problems in particular ought to be addressed. The first is that giving to complete strangers, while closer to altruism in its pure sense, may have very little relationship to caring behavior within the family. Within the family, even during a dissolving marriage, one is concerned with outcomes.

The second problem is that I have not independently examined giving in terms of time. If a study controlled for opportunity cost (income) was conducted, one could examine volunteer activities by women relative to men. Such a study would still have a drawback because it involves giving to strangers. The Independent Sector study discussed above found that 53% of the women responding to the survey reported volunteer activity during the previous twelve months, averaging 2.6 hours per week. At the same time, 49% of the men had volunteered, for an average of 1.6 hours per week.

When one focuses on altruism within the family, a gender difference does emerge. Several studies focus directly on the amount of time spent on child care, while holding income constant. Work may influence the total amount of time parents spend with children, but impact more in those aspects of the family life in which children are relatively peripheral, such as homemaking or entertaining than in specifically child-oriented activities. However, despite gender equality and involvement within the work force, it is still primarily women who raise children. One study showed a disparity of at least two to one between women's and men's participation in all child care.

138. People indicated that they volunteered because it was important to help others (90% of respondents), they felt compassion toward people in need (86%), they could do something for a cause important to them (86%), and because it made them feel needed (79%). INDEPENDENT SECTOR, supra note 131, at 211, 224, Table 6.2.

139. INDEPENDENT SECTOR, supra note 131, at 59, Table 1.20. Many more married couples (56%) than single people (48%) volunteered their time, and both these groups volunteered more than divorced, separated or widowed people (36%). Single women contributed .9% of their income and volunteered 2.3 hours per week; divorced women 1.4% and 1.4 hours. For single men, the totals were 1.0% and 1.4 hours per week; when divorced they gave 1.5% and 1.1 hours per week.


On the whole, women may be more altruistic than men, at least in the context of relationships. When they are bargaining over the future of their families, this difference in attitudes about relationships might well affect the bargaining result.

III. CONCLUSION

From an empirical standpoint, it is unclear whether gender differences impede women's ability to mediate successfully. Women are apparently not more risk averse. They do not trade money for more custodial time because of risk aversion, but just appear to want to be with their children more than their husbands do. Since mothers get more child support as visitation time with fathers increases, fathers are willing to "pay" for time with their children up to a point.

Feminists who claim that women are more altruistic than men also will have difficulty supporting their conclusions according to the data. Women do not give more in terms of percentages or money than men. Women seem to do more volunteer work and a larger share of housework and child care than their husbands. This difference in utilization of "leisure time," or more accurately, non-labor market activity, may not be due to unselfish and caring behavior. Greater time spent with children may occur because women derive more utility from them than their husbands do, other things being equal. Because of the husbands' greater earning potential, it is more efficient for women, with their lower opportunity costs, to work less or more flexible hours. This accommodates not only child care, with its positive value, but also housework, which most women do not actually enjoy.

The difference in earning power and consequently power within the relationship appears to be the real culprit in this story. Men have an easier exit from marriage because their investments are readily transferable. Therefore they can behave opportunistically during the marriage and can have less to lose during mediation at dissolution. Women's threats are not as credible, so they may have to settle for less. They also have a higher marginal

142. See also Rifkin, supra note 10. Since mediation emphasizes the process of resolving the dispute, rather than formal and substantive rights, id at 25, to some extent power differentials are besides the point. As she puts it, "patterns of domination are reinforced by the lawyer-client relationship, in which the client is a passive recipient of the lawyer's expertise." Id. at 30. However, since mediated divorces are not usually reviewed by judges, there will be fewer "appeals" and less control of what may be arbitrary exercises of power. See, e.g., Bryan, supra note 20, at 460.
utility of income, since their income on average is lower than their husbands'.

Because mediation is swifter, 143 less expensive, and easier on children, it is a good alternative to litigation in many divorce cases. Many women who have tried mediation liked it. However, congested courts cannot justify mandatory mediation in cases where one spouse holds a monopoly on marital power. No one should order mediation when there has been abuse within the family, substance abuse, or systematic hiding of assets.

143. Rosenberg, supra note 17, at 473 & n.25 (estimating average 3.2 hours); Pearson & Thoennes, supra note 19.