

June, 2013

Would women leaders have prevented the global financial crisis? Teaching critical thinking by questioning a question

Julie A. Nelson, *University of Massachusetts Boston*

**GLOBAL DEVELOPMENT AND ENVIRONMENT INSTITUTE
WORKING PAPER NO. 11-03**

**Would Women Leaders Have Prevented the Global Financial
Crisis? Implications for Teaching about Gender, Behavior, and
Economics**

Julie A. Nelson
September 2012

An earlier (October 2011) version was presented at the 2011 Annual IAFFE Conference, Zhejiang Gongshang University, Hangzhou, China, June 24-26, 2011, and distributed as Global Development and Environment Institute Working Paper 11-03 (pre-revision). Funding from the Institute for New Economic Thinking aided this revision, which is also available as INET Research Note #14.

Tufts University
Medford MA 02155, USA
<http://ase.tufts.edu/gdae>

Abstract:

Would having more women in leadership have prevented the financial crisis? This question may arise in courses on Gender and Economics, Money and Financial Institutions, Pluralist Economics, or Behavioral Economics, and offers an important teaching moment. The first part of this essay argues that while some behavioral research seems to support an exaggerated "difference" view, non-simplistic behavioral research debunks this and instead reveals the immense unconscious power of stereotyping. The second part of this essay argues that the more urgently needed gender analysis of the financial industry is not concerned with (presumed) "differences" by sex, but rather with the role of gender biases in the social construction of markets. Specific examples and tools that can be used when teaching about difference, similarity, and markets are discussed throughout.

Keywords:

Feminist economics, financial crisis, risk aversion, risk, economics education, behavioral economics, stereotyping, gender, sex, finance, markets

Would Women Leaders Have Prevented the Global Financial Crisis? Implications for Teaching about Gender, Behavior, and Economics

Julie A. Nelson¹

Introduction

In the aftermath of the crisis that shook United States and global financial markets in the fall of 2008, speculation arose about it whether it may have been caused, in some sense, by masculinity run amuck. Referring to the bankruptcy of Lehman Brothers investment bank, some asked "whether we would be in the same mess today if Lehman Brothers had been Lehman Sisters" (Kristof 2009; Morris 2009; Lagarde 2010). In Iceland, women were called in to replace high profile male bank leaders and institute a "new culture" (O'Connor 2008). *Time* magazine, having run a laudatory cover featuring Federal Reserve and government economists Alan Greenspan, Larry Summers, and Robert Rubin in February 1999, followed in May 2010 with a similarly-posed cover featuring the regulators Elizabeth Warren, Sheila Blair, and Mary Schapiro. These, *Time* said, were "The women charged with cleaning up the mess."

Would having more women in leadership positions in finance and its regulation naturally lead to a kinder, gentler, and tidier economy? This question can might an engaging case study for courses in "Women and the Economy," "Gender and Economics," or "Feminist Economics." Courses on "Money and Financial Institutions" or "Pluralist Economics" may encounter this question in the course of examining possible solutions to the post-crisis malaise, and courses in "Behavioral Economics" may raise questions about sex difference in preferences or choices. It leads back into long-running debates about "the sameness" or "difference" of the sexes, now with an emphasis on "difference." What is a economics instructor (or other social scientist or commentator) to do? Should we accept the idea that women leaders would create a better economy, and consider it as empowering for women? Or should we resist it, and if so, on what grounds? Unless we want to confine ourselves simply to questions of the impact of the financial crisis *on* women—a project, that while certainly worthy of exploration, on its own tends to de-emphasize women's agency and directs attention away from the halls of power—we need to address these questions.

This essay argues that there *is* a gender angle to the financial crisis, but that it is not about "differences" in traits that men and women "bring with them" to their jobs. The question asked in the title of this paper is, it is argued, fundamentally badly stated. The first part of this essay discusses how the "difference" view has recently resurged within economics, bolstered by simplistic binary thinking, low quality behavioral research, and

¹ Julie A. Nelson is Professor and Chair of the Department of Economics, University of Massachusetts Boston and Senior Research Fellow at Tuft University's Global Development and Environment Institute.

media hype. As a case in point, the literature on sex differences in risk aversion will be discussed. Better quality behavioral and neuroscientific research, including important recent research on stereotyping, however, points to a more sophisticated and nuanced understanding. Teaching the skill of noticing both difference *and* similarity, this essay argues, is essential for developing critical thinking.

The second part of this essay identifies the overwhelmingly more important gender dimension of the financial crisis: The habit of thinking (at least in Western, Post-Enlightenment cultures) of market commerce and finance as stereotypically masculine in nature. Commentators from the left and right alike tend to regard capitalism as characterized in some intrinsic and unavoidable way by masculine-stereotyped qualities such as risk-taking and self-interest, to the exclusion of feminine-stereotyped qualities. This mental image severely distorts what we believe we can and should expect from institutions and leaders (of either sex) in finance, especially in regard to their social and ethical responsibilities. While this false image is largely accepted even by many with ostensibly progressive and feminist sensibilities, it actually helps create and reinforce both cowboy capitalism and sexist oppression. Insights from feminist economics about the biased perceptions underlying the image of the economic "machine" should inform teaching about economics across the board.

Behavioral Research—Friend or Foe?

The fields of behavioral economics (which looks at how people actually make decisions rather than at how a hypothetical "rational actor" would make them) and neuroeconomics (which uses brain scans and such in the study of decision-making), are currently in vogue within (or at least at the close margins of) the economics profession. To some extent, these can be welcomed by feminist economists and many other pluralist economists, to the extent we have long critiqued the image of the ethereal, disembodied, and disembedded agent so dear to classical liberal philosophy and economics (e.g., Ferber and Nelson 1993). Unfortunately, however, such a focus on psychological research has also encouraged a resurgence of "essentialist" views of human sexual difference: Any detectable difference in behavior or brain organization is, once again, being interpreted by some as a hard-and-fast explanation for—and rationalization of—occupational segregation, social hierarchy, and economic inequality.

"Lehman Sisters"

The popular arguments in favor of a "Lehman Sisters" viewpoint are based on the belief that there are fundamental and sizeable differences between males and females in their attitudes towards finance. "Several gender studies have pointed out that women behave and manage differently from men. They tend to be more risk-averse and to focus more on a long-term perspective," writes one French management professor Michel Ferrary (Ferrary 2009), for example. Another management consultant reports that many male executives "feel, from experience, that women tend to be more risk-averse," and that women are "more willing to...defend an issue of governance or ethics" (Wittenberg-

Cox 2009). Christine Lagarde, France's minister for the economy, industry and employment, has written how "as a woman I am, perhaps, more keenly aware of the damage that the crisis has done" (Lagarde 2010).

Various kinds of evidence are called as evidence that women are more risk-averse (that is, cautious about taking gambles), less prone to overconfidence, less competitive, more sensitive to losses, and more long-term-oriented than men. Ferrary, for example, bases his conclusion on a study of the relation of the gender diversity of boards to corporate performance (Ferrary 2009). Myriad researchers have studied gender and risk aversion, or gender and pro-social behavior, by presenting experimental subjects with hypothetical situations or choices concerning lotteries (see reviews in Croson and Gneezy 2009; Nelson 2012), usually in the context of modern economies in the Global North.

While it is sometimes mentioned that such observed differences could be due to differences in socialization (e.g., girls being raised to be less competitive) or created by positional inequalities (e.g., people in weaker positions may have good reason to be more sensitive to losses), biological and evolutionary explanations seem to be currently in vogue. It has been suggested that the levels of testosterone among men working on financial trading floors is related to the ability to make profitable decisions (Coates and Herbert 2008).¹ A large number of popular books (see review in Fine 2010) have argued that men and women are "hard-wired" differently, though the influence, for example, of genetic differences and prenatal hormones. Assertions such as Simon Baron-Cohen's (2003) that men being natural "systematizers" while women are natural "empathizers" have gained audience. The "difference" perspective has influenced the business management literature, where a cooperative and relational approach has been associated with women (Schumpeter 2009). At the extreme, "difference" advocates portray gender differences as large, "Men are from Mars, Women are from Venus" (Gray 1993) dichotomous gulfs between the sexes.

Responses

Feminist writers in the 1970s and 1980s worked hard to discredit biological "proofs" of women's inferiority, and to reveal how an inclination to look for sex "differences" had biased previous research. Many feminists perhaps tend to think of that battle as already having been won. With new generations of readers and a new resurgence of "difference" literature, however, active response is again necessary.

Feminist writers including Roz Barnett and Caryl Rivers (2004), Lise Eliot (2009), Janet Shibley Hyde (2005), and Cordelia Fine (2010) have taken on this task. A few of the major critiques of the essentialist literature—both old and new—may be noted as follows:

- Much of the research on which broad generalizations have been based does not merit confidence. Many studies were based on small samples, offered conclusions and interpretations that were not justified by the data, and/or have since been discredited by later research.

- Studies which find sex differences tend to be considered sexy and publishable, while those that do not are not. This "file drawer effect" will tend to skew reporting towards "difference." (Also recall that is, if a 5% level of statistical significance is used to test for "difference," then 1 in 20 studies may show such "difference" just by chance.)
- Meta-analysis (Byrnes, Miller et al. 1999; Hyde 2005) shows that when differences in the behavior of adult men and women have been found, they are not uncommonly quite small. Rather than different planets, it seems that "Men are from North Dakota, Women are from South Dakota" (as Dindia 2006, has quipped). This point will be discussed further below.
- Many of the results seem to be highly dependent on context, varying quite widely over types of situations encountered or the nationality or cultural background of the subjects, further shedding doubt on essentialist views. A number of sociologists have pointed out how inequalities in power and access to resources can create the "differences" that are incorrectly attributed to sex (Acker 1990; Kimmel 2000).
- The links from hormones or brain organization to behavior are far from well-established, as the more serious researchers acknowledge. The brain's "plasticity" (Eliot 2009), or responsiveness to experience, makes it particularly hard to attribute behaviors to "nature" alone. The finding of structural differences in the brain also does not—contrary to the popular "difference" literature—point unambiguously to differences in function or ability (Fine 2010, Ch. 13).

None of the abovementioned critics of the "difference" literature claim that males and females are biologically and neurologically identical, only that the essentialist "difference" claims are far overblown.

Economists and the Case of Risk-Aversion

As reviewed earlier, beliefs about gender differences in risk-aversion, altruism, morality, confidence, and interpersonal skills underlie the assertions about gender differences in management skills. For the sake of tractability, and because it has been of particular interest to economists, this essay focuses on the issue of risk aversion.

The economics literature on gender and risk-aversion has, unfortunately, been characterized by a "difference" emphasis and a consequent frequent display of some or all of the flaws just mentioned. "We find that women are indeed more risk averse than men" conclude economists Rachel Croson and Uri Gneezy (2009, 448) in their review article "Gender Differences in Preferences," published recently in a major journal of the American Economic Association. They base their conclusion on the finding of statistically significant differences between the proportions of men and women who, in experimental situations, say they would choose to enter a lottery, or in differences in the average dollars amount men and women say they would be willing to pay in order to enter a particular lottery, and on some specific cases of observed differences in pension investment behavior.

But what does the statement that "women are more risk averse than men" actually mean, especially in relation to the question of whether women would "bring something different" to positions of power in the finance industry? It communicates the idea that risk aversion is an intrinsic sex-linked trait: Women are associated with greater risk-aversion, and risk-aversion is in turn equated with womanliness. The interpretation of risk aversion as a sex-linked trait is obvious in the titles of such risk-related articles as "Will Women Be Women?" (Beckmann and Menkhoff 2008) and "Girls will be Girls" (Lindquist and S  ve-S  derbergh 2011). The presumption in such titles is that were a woman or girl *not* risk averse, she would somehow be denying her own female nature. Many studies hypothesize evolutionary explanations for female risk aversion (e.g., Olsen and Cox 2001; Cross, Copping et al. 2011).

Such an interpretation, however, *does not, in fact, correspond at all* to the any of the research on which the statement is based, due to the empirical importance of intra-sex variability. There is a world of difference between the statements "In this study, women's *mean* score on the measure of risk-taking is lower than men's" and "women are more risk averse than men."² Not all women act the same way, nor do all men. It is rather amazing that in economics and finance—disciplines that pride themselves on their quantitative savvy—that a very basic quantitative question, "*How* different?" is so rarely asked. A *statistically* significant finding of "gender difference" (in means) is trumpeted as a "research result," with little or no attention to the *substantive* size or importance of the difference, or the degree of overlap of the distributions. While favoring of statistical over substantive significance is a common bad habit of economists (Ziliak and McCloskey 2004), it is particularly noticeable in this case because of its divergence from the practice followed in much of the literature on sex differences in psychology (e.g., Byrnes, Miller et al. 1999; Wilkinson and Task Force on Statistical Inference 1999; Hyde 2005; Cross, Copping et al. 2011), in which summary measures of substantive size are reported. Croson and Gneezy's (2009) survey of the sex differences literature for economists, in sharp contrast, states only whether statistically significant differences were or were not found.

A companion paper to this one (Nelson 2012) surveys the economics and finance literature on gender and risk aversion. One finds that not only is information on the substantive size of differences not generally given, but (1) the sorts of statistical information that would allow the reader to analyze the substantive size of the differences is often not presented and (2) the existing literature on sex differences is often mis-cited or selectively cited. In addition, (3) findings of "no sex difference" are systematically underplayed or ignored, and (4) findings that women sometimes act, on average, in a statistically significantly *less* risk-averse way than men may be explained away in a highly contrived manner. A reasonable conclusion is that the habit in much of economics and finance is to *look for* difference, and make the empirical results conform to societal preconceptions.

Why might this be? One obvious reason may be that "difference" findings tend to serve the interests of those who want to sustain gender inequalities in economic power (Acker 1990; Barnett and Rivers 2004). Findings that women financial managers have a

different "management style" could be used to exclude women from certain realms—for example, to limit women to areas of finance where they are assigned do the hard, unappreciated, and relatively low-paid work of "cleaning up the mess" in bad times, and where they never get the chance to prove that their ability to do more the interesting, creative, and highly compensated work of leading risk-taking organizations in good times (Hall-Taylor 1997; Corrigan 2009; Ibarra, Gratton et al. 2009). The biased presentation of results also bolsters the image of economics as a masculine realm, which might be important for the self-identification of some economists.

In this essay, though, I would like to explore a complementary explanation to that of the preservation of power, which is that a "difference" belief also capitalizes on certain of our cognitive weaknesses. Because this essay is directed towards a scholarly audience, who presumably should be especially concerned with the creation and dissemination of knowledge, and because many of us teach students who may demonstrate these cognitive biases in spades, I will concentrate here on the cognitive aspect.

The Temptations of Simplicity

While behavioral research that exaggerates sex "difference" should be looked on with extreme skepticism by feminist economists, behavioral research on cognitive schema, stereotypes, and confirmation bias are very relevant to examining this tendency towards exaggeration. Cognitive schema are simple mental groupings we use to organize our perceptions. Stereotyping is a process by which individuals are mentally associated with such simple groups. Confirmation bias refers to our human tendency to only take in information that confirms our pre-existing beliefs

The pervasive tendency to draw contrasts between male and female is itself a symptom—researched by some behavioral scientists—of our embodied, evolved, often helpful but sometimes also dysfunctional cognitive habits. The habit of grouping stimuli into categories—the simpler the better—saves on cognitive processing effort. As psychologists use the term, cognitive schemas are the way in which we "organize incoming information and integrate it—through no conscious act of will—into clusters" (Most, Sorber et al. 2007, 287). Stimuli that correspond to an existing schema can be more rapidly processed than stimuli that must be individually sorted and assimilated piece by piece. Research indicates that gender difference is among the organizing principles we use to categorize what we see. We also tend to have a bias towards believing that what is easy is true (Bennett 2010), and what is easier than a simple binary or polar contrast? Binaries such as male/female or up/down (Lakoff and Johnson 1980) seem to be important building blocks for how we perceive, think, and communicate. Because so much of this processing is unconscious, we may not be at all aware of how much influence the attraction to simple binaries has on our perceptions and beliefs.

Thought habits including the overuse of simple binaries and stereotypes can make us stupid. When I teach my undergraduate class on gender and economics, I bring this point home to my students by asking them this decades-old riddle:

A man and his son are in a car accident. The father is killed instantly, and the boy is taken by ambulance to the nearest emergency room. The emergency room surgeon, however, says "I can't operate on him—he's my son!"

How can you explain this?³

Being that I teach in Massachusetts where same-sex marriage is now legal, I also tell the students that the answer is not that the boy is being raised by a gay couple. I relate this riddle in a class on gender and economics, usually shortly after we have gone over statistics about the changes in the gender composition of occupations in the U.S. from 1970 to the present. Generally about a third of my students—still, in the 2010's, and after discussing the movement of women into non-traditional occupations—hand in answers saying that the surgeon is the boy's stepfather, or the man in the car was the boy's priest, or that the student is simply stumped. Upon hearing the straightforward answer, these students are often incredulous—hitting their foreheads or looking shocked—at their own lack of insight. The word "surgeon" fits so comfortably into the "male" cognitive schema that logical thought is actually blocked.⁴

Beyond Simplicity

Perceptions of gender variation also gravitate towards another simple binary: sameness/difference. For a while, in the 1970s and 1980s, "sameness" was the rage, with much talk of androgyny and a requisite belief, among some feminists, that gender was totally a social construction—that is, that it was entirely the result of "nurture" and power differentials, with no basis in "nature." With "difference" now resurging, observable differences in "nature" such as sex-specific chromosomal and hormonal phenomena are being extrapolated into Mars-versus-Venus disjunctive categories.

Is there no middle ground? Unfortunately, evidence from my own class indicates that—even after explicit coaching in examining the middle ground—the simplistic sameness/difference binary often maintains a great deal of cognitive power. I had assigned and lectured on a reading from the above-referenced book by Lise Eliot, a neuroscientist whose work acknowledges neurological and hormonal differences between the sexes, but also, emphasizing the plasticity of the brain and intra-sex variability, gives significant attention to cross-sex similarities. That is, it argues that males and females are *both* somewhat different from each other *and* also largely similar to each other. Her book is subtitled *How Small Differences Grow into Troublesome Gaps—and What We Can Do About It*.⁵ On a true/false quiz I then gave my students, the following were among the questions:

- _____ 1. Eliot's main point is that men and women are biologically very different from each other.
- _____ 2. Eliot's main point is that men and women are really the same.

In spite of all the students having heard the same lecture,⁶ 31% answered that the first statement was true while the second was false, and 23% answered that the first was false while the second was true. Less than half—only 42%--were able to buck dualistic

thinking and answer, appropriately, that Eliot made neither argument.⁷ Why is it so hard to communicate the simple idea that males and females are *both* somewhat different from each other *and* also largely similar to each other?

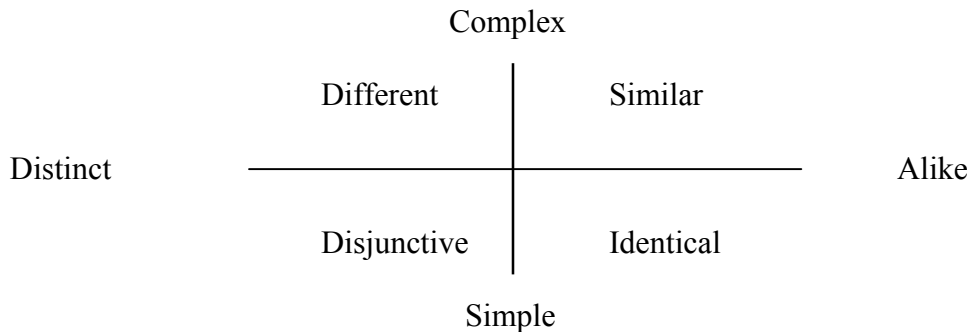
I have in other works suggested the use of a "compass" as a tool for opening up possibilities that have been hidden by simple binaries. In the polarity shown in Figure 1, only one side or the other can be chosen.

Figure 1.



Once one admits the least amount of "difference," "sameness" is no longer possible. In a "compass," a new binary is introduced. In this case, suppose we add a dimension of complexity to this picture.

Figure 2.



That is, in a simple world, men and women would be either completely identical or totally different/disjunctive. But in the complex world we live in, the question is not so simple. Psychologist Janet Shibley Hyde has proposed the "gender *similarities* hypothesis" (2005, emphasis added) as an antidote for the overwhelming attention being given to testing hypotheses about gender *differences*.

Examining and quantifying the *degrees* of distinctness and likeness is not, in fact, difficult to do, and could be easily added to economic studies. In Beckmann and Menkoff's "Will Women be Women?" article, for example, one of biggest statistically significant⁸ sex differences found is in what the authors refer to as "tournament behavior" among Italian male and female fund managers (2008, 379). The use of professional fund managers as subjects is an improvement over some of the other studies in the literature, in regard to the question of gender and Wall Street, since men and women who self-select into financial occupations may have different characteristics than the general undergraduate student populations who are the subject of many other studies. But is the authors' affirmative answer to their own question actually justified? When asked whether, having a portfolio which has outperformed a benchmark up to that point, the fund manager would "decrease the relative risk level to lock in the performance" 82% of the

Italian women managers in this study said they would do so, as compared to 57% of the Italian male managers. 18% of the women managers and 39% of the male managers said they would "not change," while none of the women and 5% of the men said they would "increase risk."

Clearly, in this example, men and women are both similar and different. If avoiding risk is thought of as "womanly," it seems that 57% of Beckmann and Menkoff's male managers "are women." On the other hand, if *not* decreasing risk is "manly," then 18% of the women managers apparently "are men." In response to the authors' question "Will Women be Women?" the answer actually seems to be that a number of women "are not," while a majority of men "are." Such analysis should shed some doubt on idea that risk-aversion is a sex-linked trait.

Such an analysis of overlap can also be formalized in a way that eases cross-study comparisons. Readers may be familiar with the "index of occupational segregation" long used to study gender segregation of occupations (Reskin 1993; Blau, Ferber et al. 2010, 135), or the mathematically equivalent "index of dissimilarity" (also called "Duncan's D") long used to study racial housing segregation (Duncan and Duncan 1955). These represent the percent of either males or females (blacks or whites) who would have to *change* their occupation (residence) for the responses to be identically distributed across the sexes (races). I suggest taking one minus this formula to create an *Index of Similarity* (or *IS*):

$$IS = \text{Index of Similarity} = 1 - \frac{1}{2} \left(\sum_i \left| \frac{f_i}{F} - \frac{m_i}{M} \right| \right)$$

where f_i/F is the proportion of females within category i , and m_i/M is the proportion of males in that same category. *IS* can take on values from 0 to 1, and represents the proportion of either men or women who (assuming equal size samples) could be paired with someone of the opposite sex who gives exactly *the same* response. For the fund manager example being discussed, one can calculate an "Index of Similarity" or "*IS* value" of 75%. In one number, one can summarize Beckmann and Menkoff's data as indicating that male and female fund managers are rather more similar than different.

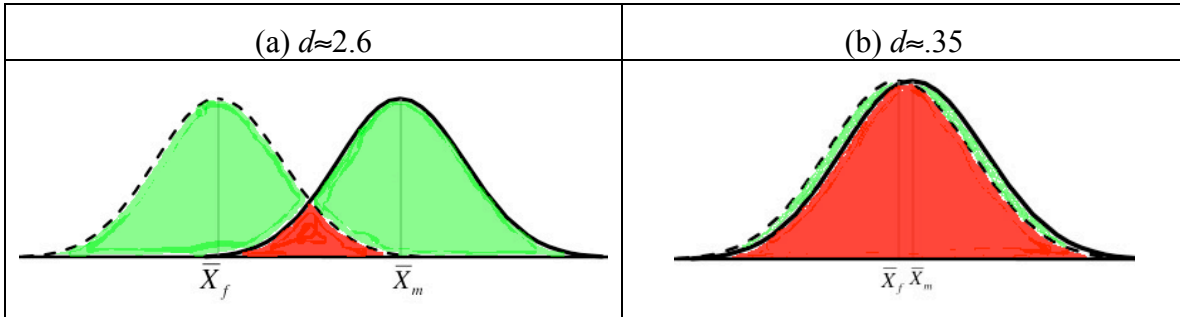
While the "index of similarity" works well for categorical variables, the substantive size of gender differences in behavior measured by continuous variables is commonly, in the psychological literature, measured by a "*d* score," also known as "Cohen's *d*" or (as one measure of) "effect size." It is calculated as the mean for male on some measure minus the mean for females, divided by the pooled standard deviation:

$$d = \frac{\bar{X}_m - \bar{X}_f}{s_p}$$

where \bar{X}_m is the male mean, \bar{X}_f is the female mean, and s_p is the pooled standard deviation, a measure of the average within-group variation. As conventionally set up in the psychological literature on gender differences, a positive value for *d* represents a case where the male score exceeds the female score, and a negative score the reverse. Taking an idealized case in which a variable is normally distributed and has the same standard

deviation for men and women, the difference between large and small d scores is visually illustrated in Figure 3.

Figure 3.



The graph in panel (a) of Figure 3 illustrates two distributions whose difference is measured as $d \approx 2.6$. This approximates the real world distribution of male and female heights (Eliot 2009, 12). The dark-shaded area that is contained in both curves signifies overlap or similarity. The (larger) light-shaded areas under each curve that do not overlap indicate difference. Adult male and female average heights are, in daily life, noticeably different, though there is considerable variation within each group and some overlap. Sex differences in throwing velocity and throwing distance also tend to have very large d scores, of near 2 (Hyde 2005, 585). The graph in panel (b) illustrates $d \approx .35$. While panel (a) is predominantly light, showing larger differences (non-overlap) than similarities (overlap), panel (b) of Figure A3 is predominantly dark (far more overlap than non-overlap).

So *how big* are most empirically observed sex differences? Hyde's (2005) meta-analysis of 124 sex-related effect sizes resulting from tests of math and verbal abilities, communication, personality, self-esteem, and motor behaviors (such as throwing) found that that 78% of reported gender differences were *smaller than* $d = .35$. More to the present point, a meta-analysis of 150 studies on risk-taking done by behavioral researchers James P. Byrnes, David C. Miller, and William D. Schafer found a weighted mean d score of .13. The very largest d score was 1.45, and the very smallest was -1.23 (indicating more risk-taking by females), with 60% clustering between -.08 and +.49. A meta-analysis of sex differences in "impulsivity" by psychologists Catherine P. Cross, Lee T. Copping, and Anne Campbell also analyzed some factors relevant to risk-taking, such as sensitivity to punishment and reward, sensation-seeking, and the ability to control one's behaviors. Reviewing 741 effect sizes, they found that sex differences in many cases were missing or inverse to what they had hypothesized, with the largest statistically significant difference (in sensation-seeking) having a value of $d = .41$ (Cross, Copping et al. 2011). In a review of 24 papers on sex and risk for which some d and Index of Similarity values can be calculated, Nelson (2012) finds that many differences are statistically insignificant, and among those that are statistically significant most d -values are less than .50 and most IS values exceed .80. With d and IS values in these ranges, one would very frequently be wrong if one guessed that a woman would show risk-averse behavior, or that a person showing risk-averse behavior would be a woman.

"Sameness" would, in terms of images like those in Figure 3, imply completely identical distributions, while a simplistic binary understanding of "difference" would imply distributions that do not overlap at all. For the behaviors being considered here—and especially risk—the more accurate image to hold is Figure 3(b), illustrating a great deal of empirically-found similarity *and* a small amount of difference.

Have I convinced you, the reader, to stop thinking in binaries? While my students are relatively more able to imagine overlaps in areas where observed differences can be more plausibly explained by social pressures or culture, as characteristics get closer to what we think of as biologically determined, their ability to think in a non-binary way tends to disappear. Here is a test: Imagine that we gather data about men, women, and pregnancy—specifically, we determine the number pregnancies each will have over his or her lifetime. Do the male and female distributions overlap?⁹

Gender and the Social Construction of Wall Street

A more gender-diverse financial industry would be different from the current one, but *not* because women "bring something different" with them, that men do not possess, when they enter it. As we have just seen many women act "like men" and vice versa, so that one cannot reliably predict behavior from sex. Rather, the important point is that the perspective of any sort of cultural outsider begins to make apparent the particularity of behaviors and values otherwise mistaken as natural, universal, and appropriate within any cultural in-group.

Stereotypes, Masculinity, and Finance

Commerce, in general, has been imagined—at least in the West, and at least since Victorian times—as "masculine," in contrast to the "feminine" sphere of home and family. This cultural ascription of masculinity to the market sphere both makes it seem that only men are the naturally more appropriate participants (thus rationalizing the sexist exclusion of women from positions of financial power), *and* also makes it seem that only masculine-stereotyped behaviors, values, and skills are natural and appropriate. Participants in commerce are, in particular, assumed to engage in risk-taking and competitive behaviors, to be motivated by individual self-interest, to not pay much attention to social relationships, and to need technical competence to be successful. Note how these are distinctly *not* the same behaviors and values assumed for women and caring labor, as illustrated in Table 1. When caring for family members or working in areas of industry such as child care or nursing, a person is often assumed to be careful,¹⁰ protective, cooperative and altruistic, to express interpersonal warmth, and to possess any requisite abilities simply as part of their (her) "nature." Notice that this dualistic view is just another list of (overly-) simple binaries.

Table 1.

Masculine Stereotypes and Finance	Feminine Stereotypes and Caring Labor
risk-taking	careful, protective
competitive	cooperative
self-interested	altruistic
impersonal	warm
mastery, competence	"naturally" arising

Among areas of commerce, the financial industry seems to have taken the exaggeration of "masculinity" to an extreme. Linda MacDowell in a 1990s study of the City of London (the UK's equivalent to the US's Wall Street) described it as "riven by sexualized and gendered scripts" (McDowell 2010, 652). She described masculine iconic figures of upper class patriarchs and traders, the latter being "embodied as the quintessence of masculine energy... The exuberance, outrageous energy and machismo of traders matched the speed of trading and dealing: shouting, sweating, and screaming..." (McDowell 2010, 653). To these icons we might add the more recent rise of the technocratic masculinity of the mathematical modeler absorbed in complex calculations for valuing financial derivatives (de Goede 2004, 207). Popular writings, social science studies, and legal cases have brought to light unusually the macho and sexualized culture of Wall Street, highlighting virulent sexual harassment and entertainment of clients with prostitutes, as well as the bringing into the common lexicon phrases such as "Big Swinging Dicks" (referring to successful securities salespeople) and "the Boom Boom Room" (Smith Barney's frat-house styled party room) (Chung 2010, 180, 228). *Time* magazine's choice of the word "sheriffs" to describe Wall Street regulators (Figure 1) is an oblique reference to the wild, reckless, undisciplined "cowboy" image of US finance.

The Invention of the Masculine "Nature" of Commerce

This masculine-sex-typed image of what finance is about severely distorts what we believe we can and should expect from its institutions and leaders. Note that while the home is imagined as the realm of virtue and duty, in the masculine image of the marketplace social and ethical responsibilities have no place. Right-leaning commentators will appeal to the free market myth to justify this exclusion: The economy is imagined to be an engine fueled by the energy of self-interest, which when guided by the "invisible hand" of market competition serves the social good. Left-leaning commentators likewise accept the image of the mechanical, self-interest-driven capitalist economy, but decry instead of praise its effects. Both the right and left tend to be dismissive of appeals for corporate responsibility (or any ideas of corporate vision that go beyond profit maximization) because these go against what they believe to be the essential "nature" of market systems. Many feminists have accepted this image of commerce as well. Particularly among feminists in sociology or the humanities, images of a soulless capitalism inherently in league with patriarchy have been popular (e.g., Acker 1990; Orr 2009).

But what if this image of the "nature" of market economies is wrong? The masculine image of economies was, in fact, invented by economists. Historically, it in

part goes back to the 18th century work of Adam Smith (Smith 1776[2001]). Although Smith was a much more complex thinker than his modern legacy would suggest, one part of his thought has had a profound impact on how we think about economics: Smith suggested that economies could be seen as functioning like giant machines, in which the "invisible hand" of markets magically channels the energy of individual self-interest into service of the social good. At the time that Smith wrote, of course, machinery was radically changing people's lives, and Newtonian physics—which explained many mechanical phenomena—seemed the epitome of science. So it was understandable that he applied such a mechanical metaphor to economic life. Smith laid the groundwork for thinking about economies in mechanical, a-social, self-interest-oriented terms.

But the full-fledged notion of "economic man" did not really get developed until the 19th century, when John Stuart Mill (1836) attempted to lay the groundwork for a discipline of economics that would be both fully scientific and carefully demarcated from other endeavors. Mill explicitly peeled off many dimensions of human experience: human bodies were considered to be the topic of the natural sciences; conscience and duty were consigned by Mill to the realm of ethics; life in society was given its own discipline. What was left for economics to deal with was "man [*sic*]...solely as a being who desires to possess wealth, and who is capable of judging of the comparative efficacy of means for obtaining that end" (38). This added an assumption of rationality to the idea of "economic man" as a-social and self-interested.

Why did Mill believe that he had to separate out a very thin slice of human life for analysis by each of the various fields? He believed that this was required by the nature of *science*. Significantly, his model for science was geometry, and its methodology of reasoning from abstract principles. Mill, to his credit, argued that no economist would ever be "so absurd as to suppose that mankind" is really described by only the parts of human nature selected for study in economics (38). Unfortunately, however, what remained and flourished in later economic thought was not Mill's modesty concerning the *ad hoc* premises and limited applicability of the geometry-like discipline he proposed, but rather his idea that economics must base itself on an image of autonomous, rational, self-interested beings in order to be "scientific." This approach received a big boost in the late 19th century when "neoclassical" economists found that they could mathematically formalize Mill's idea of desiring the greatest wealth using techniques of calculus.

The inventors of neoclassical economics assumed that individual consumers or workers are rational, self-interested, autonomous agents who maximize a mathematical function that represents their levels of satisfaction or utility. By analogy, firms were seen as rational, autonomous actors who maximize a mathematical function that represents their profits, that is, excess of revenues over costs. These assumptions continue to form the core of mainstream economic analysis today.

Note, then, that the notion of "economic man" is doubly gendered. First, in leaving out all aspects of human life having to do with bodies, emotion, dependence, or other-interest, it highlights only culturally masculine-associated notions of humanity, while blocking out consideration of feminine-associated ones. Not only are the occupations of

feeding, cleaning, and nursing bodies (traditionally assigned to women) made invisible, but *everyone's* experiences of social life in general—and of dependency in childhood, illness, and old age in particular—are denied. "Economic man," in contrast to real humans, neither ever needs care nor has any responsibility or desire to give it. Secondly, the origin of, and continued allegiance to, "economic man" reflects the impact of a gender-biased view of scientific endeavor, which prioritizes mathematical and abstract thinking, and denigrates qualitative analysis or delving into particulars. In attempting to achieve "scientific" status, the discipline of economics has, ironically, instead fallen into dogma. The discipline has been—to use a card game analogy—playing with only half a deck, both in terms of assumptions about human motivation and in terms of methodology.

Unfortunately, the image of economics as being mechanical, impersonal, a-social, and therefore functioning in a realm beyond the reach of notions of ethics and responsibility has become entirely engrained in most popular and political, as well as academic, discourses. Many have come to believe—falsely—that a-social, narrow, profit-maximizing behavior is mandated by law or the functioning of markets—a belief that is erroneous (Nelson 2006; Nelson 2011).

The Alternative

Instead of buying into dualisms that contrast men to women, and commercial labor to caring labor, I believe that the best response is to deconstruct the binaries. If we are willing to suspend our belief in the inherent masculinity of commerce, our eyes can be opened to the elements of caring labor that are inherent within commerce (Nelson 2011). Specialists in organizational behavior and the psychological aspects of employment relations have, for example, long known that emotional and social factors play a large role in workplaces (Herzberg 1987). A few behavioral economists (Fehr and Falk 2002) have begun to recognize this as well.

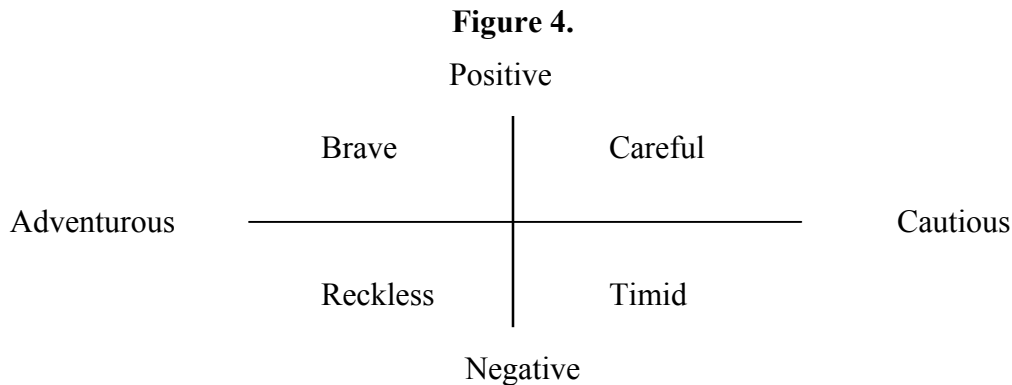
To practice thinking non-dualistically about risk, consider that some amount of bravery and risk-taking is probably a good thing for encouraging innovation and entrepreneurship. The literature risk-taking often hints that those who are not brave enough to take risks are unsuited for leadership roles. Yet the idea that this is the only interesting comparison going on arises from thinking about only the simple dualism shown in Figure 3:

Figure 3.



We can get past such trapped thinking by being willing to notice that behaviors do not follow such simple binaries. Being brave and risk-taking does not, in fact, preclude being *also* careful and protective. Psychologists who see elements of personality as containing many dimensions are already aware of this.¹¹ Figure 4 illustrates a compass

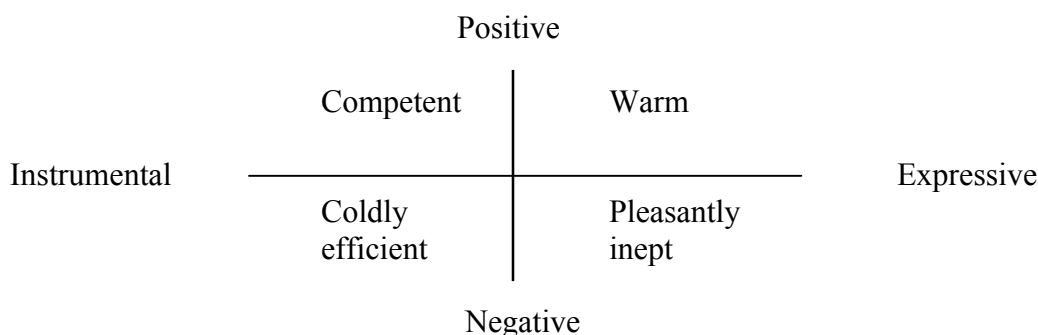
for this case, with the adventurous/cautious polarity on the horizontal axis, and a polarity of value (positive or negative) on the vertical:



Risk-taking without carefulness leads to recklessness (as, among other things, we saw in the financial crisis). Carefulness without courage leads to timidity. A recent movie, *127 hours*, provides a vivid example. It is based on the true story of a young man, Aron Ralston, who lost his arm and nearly lost his life while hiking alone in rugged territory and becoming trapped by a falling rock. The movie makes the point that, had he simply told someone where he was going (as hikers are always advised to do), he would have been rescued. In the epilogue, it is noted that Ralston still goes out on rugged hikes alone, but now tells someone where he is going. That is, Ralston still takes risks, but now also shows an appropriate aversion to being reckless. He is not timid, but he is careful. Stories of women who take brave steps to, for example, protect their children from abuse could be likewise used as illustrations.

To return to the main topic of the present essay, the above analysis implies that a leader in the financial industry or its regulation should be prepared to take risks, but also to do so with proper caution and care. When a one-sidedly "macho" culture of finance developed, however, it became all too easy to denigrate appropriate caution as something sissified and weak, while elevating the reckless behavior associated with aggressive masculinity.

Other aspects of Table 1 can be similarly deconstructed. Complementarities can be found between cooperation and competition, and self-interest and altruism (Nelson 1996, 136; Nelson forthcoming, August 2011). In particular, psychologists have noted that personality traits of *warmth*—"the expressive factor (including such traits as understanding, sympathetic, and loyal)" (Moore 2007)—and *competence*—"the instrumental factor (including such traits as analytical, decisive, leader, and assertive)" (Moore 2007)—are not mutually exclusive. Individuals can rate themselves and others as high on both, only one, or neither. While historically and stereotypically, traits of competence were considered more appropriate for men, and traits of warmth more appropriate for women, in recent decades, psychologists have observed greater variability in self-attribution across genders (see also Greenwald, Banaji et al. 2002; Moore 2007). The possibility of complementarity is illustrated in Figure 5.

Figure 5.

Unfortunately, however, recognition of the complementarity of warmth and competence seems to be largely limited to culturally central groups (Fiske, Cuddy et al. 2002) such as white males. Leaders who are warm and good at managing relationships are often referred to in the management literature as having "soft skills." When such leaders are men, the simultaneous ascription of competence does not seem to be impaired. As Joan Acker has noted, "Such qualities [as warmth] are not necessarily the symbolic monopoly of women. For example, the wise and experienced coach is empathetic and supportive to his individual players" (Acker 1990, 153). Psychological research finds, however, that groups that are socially less central tend to be stereotyped as missing in one or the other positive trait (Fiske, Cuddy et al. 2002). For women, this takes the form of the notorious "double bind": If a woman acts competently she is often perceived of as cold and inappropriately unfeminine, while if she is thought of as having good relational skills, she is often assumed to be incompetent in technical domains. Stereotypes of women as being warmer or more careful or altruistic than men may be benevolent stereotypes, but they are stereotypes nonetheless. We should remember this when we are tempted to buy into them.

Yet to return to the main point, neither masculine-stereotyped traits nor feminine-stereotyped traits are, alone, sufficient to make a wise and competent financial leader. In the mechanical economy imaged by neoclassical economics, technical competence in reading financial statements and bravery in pursuing opportunities for innovation might be all that would be necessary for good leadership. But because the real economy involves real people—and real dangers—relational skills and due carefulness are also required. We forget this, and allow "cowboy capitalism," at our peril.

Conclusion

The question posed as the title for this paper is badly posed. The idea that women would "bring something different" to finance is dangerous because it (1) exaggerates sex differences in behavior far beyond the degree supported by research (2) stereotypes women (albeit *relatively* benevolently) as lacking in adventuresomeness and competent only in doing (financial) mopping up, and (3) lets men and markets morally and socially "off the hook" for the consequences of careless and irresponsible actions. On the other hand, *were* Wall Street firms and regulatory agencies such that they welcomed women

and men as equal participants, this might indicate that societal gender stereotypes were breaking down. It might also be likely, then, that certain valuable characteristics and behaviors commonly stereotyped as feminine (such as carefulness) would be encouraged industry-wide, and inappropriate male-locker-room and cowboy-type behaviors frowned upon, to the benefit of the industry and society.

Teaching about gender, economics, and/or finance using the example of the financial crisis, then, can be a prime opportunity to develop students' critical thinking skills. It is worth stressing to students that before one can come up with a good answer one has to come up with a good question. Being able to recognize a questionable question, and being able to evaluate the empirical (and other sorts of) evidence that can be drawn on to evaluate it, are skills that would serve economics students well in their future studies and future lives.

J. A. Nelson is a Senior Research Fellow at the Global Development and Environment Institute, Tufts University, and a Professor of Economics at the University of Massachusetts, Boston. She received her Ph.D. in Economics from the University of Wisconsin. Inquiries can be directed to Julie.Nelson@tufts.edu.

NOTES

¹ Since the study was done only on men, however, it does not itself address the question of gender difference.

² For more about the linguistic and statistical issues surrounding aggregate versus generic statements see Nelson (2012).

³ I have not been able to find the source of this riddle. For an interesting video on its use, see <http://news.yahoo.com/video/us-15749625/different-generations-same-riddle-21861323>

⁴ The surgeon is the boy's mother. I myself took several minutes to work this out when I first heard it—although, in my defense, that was decades ago.

⁵ The title of the book is, unfortunately, *Pink Brain, Blue Brain*. I would wager good money that the title was chosen by the publisher's marketing department rather than the author.

⁶ I cannot, unfortunately, assert that they all did the reading.

⁷ One student, a poor reader, said that both statements were true.

⁸ Many of the results they found, in four countries, were *not* statistically significant, and one was statistically significant in the direction of indicated greater *female* risk-taking. In spite of these indications, the authors still concluded that gender differences are "robust" (379).

⁹ They overlap, since some women never become pregnant, either by choice or due to infertility. While data on pregnancies are hard to come by, one can get an idea of how large the overlap might be by looking at data on childbearing. According to U.S. Current Population Survey data from 2008, 17.8% of US women aged 40-44 never had a child (U.S. Census Bureau 2010). Since childbearing after age 40 is still relatively rare, one might guess that the overlap for non-childbearing is 15% or more, while the overlap for non-pregnancy (given possible miscarriages or abortions) is somewhat less. My students generally shout out "no overlap" when I ask them this question. Then I stare at them silently until someone thinks about it, and answers correctly. If one were to ask about *future* pregnancies—a topic of relevance for thinking about employment in certain hazardous jobs—the area of male and female overlap would be very substantial, being that it includes nearly all women over age 45 or so.

¹⁰ The term "careful," of course, could be taken to mean either "cautious" (risk-averse), or "full of care" (concerned for or acting to improve someone else's well-being). In the present paper I focus mainly on the first meaning, having discussed the second meaning in other works (Folbre and Nelson 2000; Nelson 2006; Adams and Nelson 2009; Nelson forthcoming, August 2011).

¹¹ In the HEXACO personality model, for example, "brave" (as contrasted to "fearful") is part of the "emotionality" dimension, while being "careful, thorough" as opposed to "negligent, reckless" is part of the "conscientiousness" dimension. Each of the dimensions is thought of as being largely related to the others, so that knowing a person's personality type on one dimension is not very informative about any other dimensions (Anonymous 2011).

REFERENCES

- Acker, Joan (1990). "Hierarchies, Jobs, Bodies: A Theory of Gendered Organizations." *Gender and Society* 4(2): 139-158.
- Adams, Valerie and Julie A. Nelson (2009). "The Economics of Nursing: Articulating Care." *Feminist Economics* 15(4): 3-29.
- Anonymous (2011). HEXACO model of personality structure. *Wikipedia*.
- Barnett, Rosalind and Caryl Rivers (2004). *Same Difference: How Gender Myths Are Hurting Our Relationships, Our Children, and Our Jobs*. NY, Basic Books.
- Baron-Cohen, Simon (2003). *The Essential Difference: The Truth about the Male and Female Brain*. NY, Basic Books.
- Beckmann, Daniela and Lukas Menkhoff (2008). "Will Women Be Women? Analyzing the Gender Difference among Financial Experts." *Kyklos* 61(3): 364-384.
- Bennett, Drake (2010). Easy=True: How 'Cognitive Fluency' Shapes What We Believe, How We Invest, and Who Will Become a Supermodel. *Boston Globe*. Boston.
- Blau, Francine D., Marianne A. Ferber, et al. (2010). *The Economics of Women, Men and Work*. Upper Saddle River, NJ, Pearson Prentice Hall.
- Byrnes, James P., David C. Miller, et al. (1999). "Gender Differences in Risk Taking: A Meta-Analysis." *Psychological Bulletin* 125(3): 367-383.
- Chung, Christine Sgarlata (2010). "From Lily Bart to the Boom Boom Room: How Wall Street's Social and Cultural Response to Women Has Shaped Securities Regulation." *Harvard Journal of Law & Gender* 33(1): 175-245.
- Coates, J. M. and J. Herbert (2008). "Endogenous steroids and financial risk taking on a London trading floor." *Proceedings of the National Academy of Sciences* 105(16): 6167-72.
- Corrigan, Tracy (2009). Women should be wary of financial flattery. *The Telegraph*. London.
- Croson, Rachel and Uri Gneezy (2009). "Gender Differences in Preferences." *Journal of Economic Literature* 47(2): 448-474.
- Cross, Catherine P., Lee T. Copping, et al. (2011). "Sex Differences in Impulsivity: A Meta-Analysis." *Psychological Bulletin* 137(1): 97-130.
- de Goede, Marieke (2004). "Repolicitizing financial risk." *Economy and Society* 33(2): 197-217.
- Dindia, Kathryn (2006). Men are from North Dakota, Women are from South Dakota. *Sex Differences and Similarities in Communication*. K. Dindia and D. J. Canary. New York, Routledge: 3-18.
- Duncan, Otis D. and Beverly Duncan (1955). "A Methodological Analysis of Segregation Indexes." *American Sociological Review* 20(2): 210-217.
- Eliot, Lise (2009). *Pink Brain, Blue Brain: How Small Differences Grow into Troublesome Gaps--And What We Can Do About It*. Boston, Houghton Mifflin Harcourt.
- Fehr, Ernst and Armin Falk (2002). "Psychological foundations of incentives." *European Economic Review* 46: 687-724.
- Ferber, Marianne A. and Julie A. Nelson, Eds. (1993). *Beyond Economic Man: Feminist Theory and Economics*. Chicago, University of Chicago Press.

- Ferrary, Michel (2009). Why women managers shine in a downturn. *Financial Times*. London.
- Fine, Cordelia (2010). *Delusions of Gender: How Our Minds, Society, and Neurosexism Create Difference*. NY, W.W. Norton.
- Fiske, Susan T., Amy J. C. Cuddy, et al. (2002). "A Model of (Often Mixed) Stereotype Content: Competence and Warmth Respectively Follow From Perceived Status and Competition." *Journal of Personality and Social Psychology* 82(6): 878-902.
- Folbre, Nancy and Julie A Nelson (2000). "For Love or Money - Or Both?" *Journal of Economic Perspectives* 14(4): 123-140.
- Gray, John (1993). *Men are from Mars, Women are from Venus* NY, HarperCollins.
- Greenwald, Anthony G., Mahzarin R. Banaji, et al. (2002). "A unified theory of implicit attitudes, stereotypes, self-esteem, and self-concept." *Psychological Review* 109(1): 3-25.
- Hall-Taylor, Brenda (1997). "The construction of women's management skills and the marginalization of women in senior management." *Women in Management Review* 12(7): 255.
- Herzberg, Frederick (1987). "One More Time: How Do You Motivate Employees?" *Harvard Business Review*(September-October): 109-120.
- Hyde, Janet Shibley (2005). "The Gender Similarities Hypothesis." *American Psychologist* 60(6): 581-592.
- Ibarra, Herminia, Lynda Gratton, et al. (2009). Claims that women are inherently more cautious are deeply troubling. *Financial Times*.
- Kimmel, Michael S. (2000). *The Gendered Society*, Oxford University Press.
- Kristof, Nicholas D. (2009). Mistresses of the Universe. *New York Times*.
- Lagarde, Christine (2010). "Women, Power and the Challenge of the Financial Crisis." *International Herald Tribune*: Op-Ed.
- Lakoff, George and Mark Johnson (1980). *Metaphors We Live By*. Chicago, University of Chicago Press.
- Lindquist, Gabriella Sjögren and Jenny Sæve-Söderbergh (2011). "'Girls will be Girls', especially among Boys: Risk-taking in the 'Daily Double' on Jeopardy." *Economics Letters* 112(2): 158-160.
- McDowell, Linda (2010). "Capital Culture Revisited: Sex, Testosterone, and the City." *International Journal of Urban and Regional Research* 34(3): 652-8.
- Mill, John Stuart (1836). "On the Definition of Political Economy; and On the Method of Philosophical Investigation in That Science." *London and Westminster Review*: 1-29.
- Moore, Dahlia (2007). "Self Perceptions and Social Misconceptions: The Implications of Gender Traits for Locus of Control and Life Satisfaction." *Sex Roles* 56: 767-780.
- Morris, Nigel (2009). Harriet Harman: 'If only it had been Lehman Sisters'. *The Independent*. London.
- Most, Steven B., Anne Verbeck Sorber, et al. (2007). "Auditory Stroop reveals implicit gender associations in adults and children." *Journal of Experimental Social Psychology* 43: 287-294.
- Nelson, Julie A. (1996). *Feminism, Objectivity and Economics*. London, Routledge.
- Nelson, Julie A. (2006). *Economics for Humans*. Chicago, University of Chicago Press.

- Nelson, Julie A. (2011). Care Ethics and Markets: A View from Feminist Economics. *Applying Care Ethics to Business*. M. Hamington and M. Sander-Staudt. Dordrecht, Springer: 35-53.
- Nelson, Julie A. (2011). "Does Profit-Seeking Rule Out Love? Evidence (or Not) from Economics and Law." *Washington University Journal of Law and Policy* 35: 69-107.
- Nelson, Julie A. (2012). Are Women Really More Risk-Averse than Men? *INET Research Note #12*, Institute for New Economic Thinking.
http://ineteconomics.org/research_note/are-women-really-more-risk-averse-men
- Nelson, Julie A. (forthcoming, August 2011). Care Ethics and Markets: A View from Feminist Economics. *Applying Care Ethics to Business*. M. Hamington and M. Sander-Staudt, Springer.
- O'Connor, Sarah (2008). Icelandic women to clean up 'male mess'. *Financial Times*. London.
- Olsen, Robert A. and Constance M. Cox (2001). "The Influence of Gender on the Perception and Response to Investment Risk: The Case of Professional Investors." *The Journal of Psychology and Financial Markets* 2(1): 29-36.
- Orr, Judith (2009). Lehman Sisters? *Socialist Review*.
- Reskin, Barbara (1993). "Sex Segregation in the Workplace." *Annual Review of Sociology* 19: 241-270.
- Schumpeter (Adrian Wooldridge) (2009). Womenomics: Feminist management theorists are flirting with some dangerous arguments. *The Economist*, The Economist Newspaper Limited.
- Smith, Adam (1776[2001]). *An Inquiry Into the Nature and Causes of the Wealth of Nations*. New York, P.F. Collier & Son.
- U.S. Census Bureau (2010). Current Population Survey - June 2008, Detailed Tables. P. Division.
- Wilkinson, Leland and Task Force on Statistical Inference (1999). "Statistical Methods in Psychology Journals: Guidelines and Explanations." *American Psychologist* 54(8): 594-604 (1-24 in downloadable document).
- Wittenberg-Cox, Avivah (2009). Moving The Debate On. *Editor's View: Men, Women and The Financial Crisis*.
- Ziliak, Stephen T. and Deirdre N. McCloskey (2004). "Size matters: the standard error of regressions in the American Economic Review." *The Journal of Socio-Economics* 33: 527-546.

The Global Development And Environment Institute

GDAE is a research institute at Tufts University dedicated to promoting a better understanding of how societies can pursue their economic goals in an environmentally and socially sustainable manner. GDAE pursues its mission through original research, policy work, publication projects, curriculum development, conferences, and other activities. The “GDAE Working Papers” series presents substantive work-in-progress by GDAE-affiliated researchers.

We welcome your comments, either by email or directly to the author or to GDAE:
Tufts University, 44 Teele Ave, Medford, MA 02155; Tel: 617-627-3530; Fax: 617-627-2409;
Email: gdae@tufts.edu; Website: <http://ase.tufts.edu/gdae>.

Recent Papers in this Series:

- 12-05 [Are Women Really More Risk-Averse than Men?](#) (Julie A. Nelson, September 2012)
- 12-04 [Is Dismissing the Precautionary Principle the Manly Thing to Do? Gender and the Economics of Climate Change](#) (Julie A. Nelson, September 2012)
- 12-03 [Achieving Mexico’s Maize Potential](#) (Antonio Turrent Fernández, Timothy A. Wise, and Elise Garvey, October 2012)
- 12-02 [The Cost to Developing Countries of U.S. Corn Ethanol Expansion](#) (Timothy A. Wise, October 2012)
- 12-01 [The Cost to Mexico of U.S. Corn Ethanol Expansion](#) (Timothy A. Wise, May 2012)
- 11-03 [Would Women Leaders Have Prevented the Global Financial Crisis? Implications for Teaching about Gender, Behavior, and Economics](#) (Julie A. Nelson, September 2012)
- 11-02 [Ethics and the Economist: What Climate Change Demands of Us](#) (J. A. Nelson, May 2011)
- 11-01 [Investment Treaty Arbitration and Developing Countries: A Re-Appraisal](#) (Kevin P. Gallagher and Elen Shrestha, May 2011)
- 10-06 [Does Profit-Seeking Rule Out Love? Evidence \(or Not\) from Economics and Law](#) (Julie A. Nelson, September 2010)
- 10-05 [The Macroeconomics of Development without Throughput Growth](#) (Jonathan Harris, September 2010)
- 10-04 [Buyer Power in U.S. Hog Markets: A Critical Review of the Literature](#) (Timothy A. Wise and Sarah E. Trist, August 2010)
- 10-03 [The Relational Economy: A Buddhist and Feminist Analysis](#) (Julie A. Nelson, May 2010)
- 10-02 [Care Ethics and Markets: A View from Feminist Economics](#) (Julie A. Nelson, May 2010)
- 10-01 [Climate-Resilient Industrial Development Paths: Design Principles and Alternative Models](#) (Lyuba Zarsky, February 2010)
- 09-08 [Agricultural Dumping Under NAFTA: Estimating the Costs of U.S. Agricultural Policies to Mexican Producers](#) (Timothy A. Wise, December 2009)
- 09-07 [Getting Past "Rational Man/Emotional Woman": How Far Have Research Programs in Happiness and Interpersonal Relations Progressed?](#) (Julie A. Nelson, June 2009)
- 09-06 [Between a Rock and a Soft Place: Ecological and Feminist Economics in Policy Debates](#) (Julie A. Nelson, June 2009)
- 09-05 [The Environmental Impacts of Soybean Expansion and Infrastructure Development in Brazil’s Amazon Basin](#) (Maria del Carmen Vera-Diaz, Robert K. Kaufmann, and Daniel C. Nepstad, May 2009)

View the complete list of working papers on our website:
http://www.ase.tufts.edu/gdae/publications/working_papers/index.html