Different Voices or Perfect Storm: Why Are There So Few Women in Philosophy?[1]

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Women are significantly underrepresented in philosophy. Although women garner a little more than half of the PhDs awarded in the United States, and about 53 percent of those awarded in the Arts and Humanities,[2] slightly fewer than 30 percent of doctorates in philosophy are awarded to women.[3] And women's representation in the professoriate falls below that.[4] Why is philosophy so exceptional in this regard? My aim in this paper is not to answer this question but to contrast two different frameworks for addressing it. I call one model "Different Voices" and the other "The Perfect Storm"; I'll argue that we ought to adopt the second model and that we ought to abandon the first.

Why are there so few women in philosophy? Women who are in the field have been speculating about this for quite a while, but interest in the question has suddenly surged, engaging men now as well as women.[5] Most recently, a paper addressing this issue by Wesley Buckwalter and Stephen Stich has sparked intense controversy.[6] Buckwalter and Stich claim to have found evidence of gender differences in people's responses to common philosophical thought-experiments, and they speculate that these differences may help account for the dearth of women in the field. Their idea is that if women have different intuitions about standard thought-experiments than men do, and if men dominate philosophy, then women studying philosophy may come to the conclusion—or be told explicitly— that they just don't "get" philosophy—that philosophy is not the subject for them. More precisely, Buckwalter and Stich's suggestion is that women may be victims of a "selection effect" within philosophy. If agreement with the philosophical consensus is taken to be a *sine qua non* of philosophical ability, individuals with non-orthodox intuitions will be filtered out. If that consensus is forged within a community that is almost all-male, then it will be men's intuitions that will constitute the philosophical mainstream. If women, then, have systematically different intuitions from men's, then their intuitions will be less likely than men's to agree with mainstream opinion, and thus more likely to be filtered out. Women, in short, will be disproportionately selected against.

Now this suggestion—that there's something about philosophy and something about women that makes the one alien to the other—is not new. To choose one notable example: Kant notoriously held that women were generally incapable of abstract thought, that women's faculties of understanding were merely "beautiful," not "sublime" like men's. For this reason, the idea of a woman philosopher

was absurd. The odd woman who tried to do philosophy despite her handicap would be unsexed by the attempt: "she might as well grow a beard."[7] But it would be quite wrong to impute Kant's sexist view to Buckwalter and Stich. They are not making the retrograde claim that women do not belong in philosophy; their contention is rather that philosophy, to its discredit, does not welcome women. For this reason, the better antecedent for Buckwalter and Stich is Carol Gilligan, whose 1982 blockbuster book, *In a Different Voice*, was one of the founding works of second-wave feminist scholarship.[8] Like Buckwalter and Stich's work, Gilligan's work was initially motivated by evidence of gender differences in intuitions about thought-experiments—in her case, early data showing lower scores for women than for men on the Kohlberg Scale of Moral Development. Gilligan rejected the idea that such differences showed women to be less ethically mature than men and argued instead that they pointed to deficiencies in the view of moral judgment on which the test was based. According to her, mainstream ethical theory improperly enshrined what was in fact a male style of moral reasoning as the best and highest form while neglecting an equally valuable mode of ethical thinking that was characteristic of women. Male theorists could not hear what women had to say about morality because women spoke "in a different voice."

Buckwalter and Stich, like Gilligan, do not want to see gender differences as indicative of deficiencies in women, but rather as indicative of unintentional sexism in the methodology and pedagogy of academic philosophy. In Gilligan's view, moral theorists had failed to listen to—or even to notice—the "different voice" in which women spoke about ethical issues, and the result was an incomplete and distorted view of the moral domain. Buckwalter and Stich's indictment against philosophy concerns what they regard as the field's uncritical use of thought-experiments, especially in pedagogical settings, where, they argue, the hegemonic and preemptory style of presentation of presumably universal "intuitions" may stifle any "different voices" that might otherwise have sounded.

In evocation of Gilligan, then, let me call the kind of model that Buckwalter and Stich are proposing the "Different Voices" model. Buckwalter and Stich are not the first theorists to offer a Different Voices explanation for the skewed gender balance in philosophy. They join company with quite a few feminist philosophers who have argued, over the past three decades or so, that philosophy as it is practiced is "gendered," embodying or reflecting a distinctively male perspective. This male perspective has been held to manifest itself in a number of ways—in distinctively philosophical rhetoric or methodology, in philosophers' choice of problems to study, or in the range of thought and experience on which philosophers rely. These feminist philosophers, like B&S, presume that the features of philosophy that (on their view) make it alien to women are features that were detrimental to the practice of philosophy itself, so that it is the discipline that needs changing, not the women.

Janice Moulton argued, for example, in a widely cited paper,[9] that philosophy's "adversarial method" was off-putting to women and antithetical to feminist values. More than that, however, Moulton challenged the utility of the method,

arguing that it fostered intransigence and discouraged sympathetic consideration of opposing views, undercutting the goal of discovering the truth. Lorraine Code indicted mainstream—or, as she called it—"malestream"—epistemology for its hegemonic commitment to "abstract individualism." With its relentless abstraction of knowers from their material circumstances and its exclusive focus on the individual knower, malestream epistemology, Code argued, perpetuated the neglect of factors essential to a thorough understanding of human knowledge in all its various forms.[10] Naomi Scheman suggested that several common philosophical obsessions, like skepticism and mind–body dualism, evinced a kind of male paranoia about disconnection from the social and material world. Following Wittgenstein, Scheman argued that diagnosis, not argument, was the proper response to such pseudo-issues.[11] Many feminist political philosophers—Alison Jaggar, Linda Alcoff and Elizabeth Potter, Iris Young, Nancy Fraser, and Linda Nicholson, to name just a few, have argued that liberal political theory, in taking the notion of "rational self-interest" as its central construct, rules out from the start any proper theoretical treatment of the kinds of social connection and material engagement that form the fabric of women's lives.[12] Andrea Nye and Jennifer Hornsby have each argued, in different ways, that some approaches to the study of language reflect distinctively male modes of thought and that these approaches obscure the most important features of the phenomenon under investigation.[13] Hornsby, for example, argues that the widespread assumption that a systematic semantic theory must lie at the heart of any philosophical account of language immediately disassociates meaning from communication, a connection that she takes to be fundamental and essential.

I'm stressing these feminist antecedents to Buckwalter and Stich's thesis because I want to make clear that the strategy of positing of gender differences to account for the underrepresentation of women is not in itself, and should not be taken to be, a misogynistic or anti-feminist position. At the same time, it must be recognized that even if the model is used to argue for the accommodation rather than the correction of women, even if the blame is to be laid on the discipline, the Different Voices model is still committed to the antecedent existence of *intrinsic* gender differences. The point of insisting on intrinsicality is that, according to my analysis, the property that is cited as different between men and women must be one that is, at least for the duration of the phenomena under investigation, *brought to* the context in question. The offending characteristic in philosophy must track some stable difference between men and women, or the explanation fails.

Let me digress for a moment to make clear what I mean here. I am not using "intrinsic" as a synonym for "innate," "biological," or "natural," and I do not take the term to imply "necessary" or "essential." I use the term "intrinsic" in the sense current in contemporary analytical metaphysics, according to which a property is intrinsic if and only if it supervenes entirely on the state of the individual to whom the property is being ascribed.[14,15] The causal etiology of the property does not matter, according to my usage, and so it does not matter whether the individual possesses the property "by nature"[16] or because of interactions with the physical

or social environment. My genetic makeup is intrinsic to me, but so is the color of my skin (even though that depends causally on the amount of sun exposure I've had recently). My race, on the other hand, is arguably extrinsic, since my being white depends partly on there being a conventional system of classification that assigns social significance to certain properties of individuals, including the intrinsic property of skin color.

I assume that dispositional properties can be, and typically are, *intrinsic*. Although it is often difficult to characterize a disposition without mentioning things extrinsic to the individual to whom the disposition is ascribed, it is typically the case that the external things mentioned in the description need not exist in order for the disposition to be correctly ascribed. Salt is soluble, even in environments in which there is no water. Human characterological dispositions—being nurturant, being aggressive—can thus be, and I think, are intrinsic to the individuals who possess them. I also assume that dispositional properties are grounded in—if not identical to—the intrinsic categorical properties that explain them.[17] It is relatively easy to specify the grounding categoricals for dispositions like solubility; it is currently (and probably will be forever) impossible to specify with any precision the grounding categoricals for the behavioral dispositions of human beings, which presumably involve, at a minimum, complex neurological configurations. But of course, the structures of our brains and nervous systems are very clearly the causal product of both "nature" and "nurture," and involve different kinds and degrees of environmental invariance. So since I do not take intrinsicality to imply anything etiological or modal, I am happy to allow (what I think anyway is true) that many, if not all, such characterological dispositions are the causal result of interactions between a person and the society in which he or she lives. Prolonged exposure to violence can make a person more disposed to display violence in response to circumstances that would prompt only angry words or withdrawal from someone else. Prolonged exposure to messages about what women do or should want from life may also shape women's dispositions to choose life paths that significantly involve caring work.

What is crucial, then, to a Different Voices analysis, is its presumption that women (typically) share, for whatever reason, some particular intrinsic property. It is clear in the examples I surveyed that this assumption is at work. Moulton's analysis, for example, presumes that men and women differ in their dispositions to display aggressive behavior, or in their dispositions to seek out or to find comfortable situations of conflict. And some of the philosophers whose critiques centered on the "individualism" of philosophy linked that kind of focus to the process of male gender-identity formation, as this was described by object-relations theory. This process, according to object-relations theory, produces "fluid ego-boundaries" in women and "sharp" ones in men.[18] Scheman has argued that women's greater involvement with the material and concrete aspects of human life produces in them an antipathy to the highly abstract and outer scenarios with which philosophy is preoccupied.[19]

My exposition might suggest that I am assuming that Different Voices models treat the properties they ascribe as "categorical" in a different sense—as not admitted of degrees. If so, then it might be objected that I am misreading Moulton, Scheman, and the others—that they are saying that the differences between men and women with respect to the pertinent properties are differences of degree. On this reading, Moulton, for example, would be saying something like "the mean level of aggression among women is lower than the mean level among men." My response is that I can perfectly well allow for a scalar reading of the claims about gender difference made by the theorists I'm putting into the Different Voices camp. (I will, however, later register some concerns about the psychological feasibility of consistently interpreting generic comparative claims in this way.) What is crucial to my classification is that it is the differentiating *property* that is doing the explanatory work. The Different Voices model predicts that to the extent that women vary with respect to the pertinent property, so they will vary with respect to the phenomena we are trying to explain. If lack of aggression is supposed to explain why women find philosophy alien (or alienating), it is fine to allow that there is variance among women with respect to aggression. If there is variance among women with respect to this trait, then that should predict/explain observed demographic variance in the profession. If there are women who do pursue philosophy as a career, the model says that they should have more aggression than women who don't.

However, one need not posit substantive intrinsic differences between men and women in order to explain the demographics in philosophy.[20] There is an alternative to the Different Voices model, a model that I'll call the "Perfect Storm." According to the Oxford Dictionary, a "perfect storm" is, literally, "a particularly violent storm arising from a rare combination of adverse meteorological factors" or, figuratively, "an especially bad situation caused by a combination of unfavourable circumstances."[21] The Perfect Storm model, then, seeks to explain women's low representation within philosophy as a kind of interaction effect among familiar kinds of sex discrimination that are operative throughout society, but that take on particular forms and force as they converge within the academic institution of philosophy.

Virginia Valian takes this general approach in explaining women's relatively slow progress in achieving parity with men in academia in her book *Why So Slow?*[22] She leaves aside overt sexism, including problems about sexual harassment—factors that she acknowledges are still present—and focuses instead on modes of "implicit bias." Valian argues that much of our interpersonal interaction is mediated by "gender schemas," sets of largely unconscious beliefs about men and women that condition our perceptions and shape our normative expectations. (Gender schematic thinking and acting, by the way, is not itself gendered: it is as operative in women as it is in men, as Valian is at pains to point out.) Conflicts between gender schematic norms of femininity, on the one hand, and characteristics held to be necessary for success in academia, on the other, can result in women's work being neglected or undervalued, with predictable conse-

quences for women's careers. Such conflicts, Valian argues, are present and operative in many different academic disciplines. They generate, in my terminology, a kind of ongoing tropical storm within academia. But I want to extend Valian's basic picture to account for the singularity of philosophy. Valian points out that the effects of gender schematic thinking can interact with, and can be intensified by, other factors. For example, women who work in areas where women are thought to be less able than men frequently suffer something called "stereotype threat," a kind of self-stigmatizing anxiety that has been shown to degrade individuals' performance in a variety of tasks. Women's overall depressed performance can then confirm the original stereotype and reinforce gender schematic thinking; the tropical storm is upgraded. What I want to suggest, then, is that philosophy presents the perfect site for a class 4 hurricane: either a unique set of biasing factors converge here, or else philosophy intensifies the impact particular factors have on women's academic lives.[23]

Which model should we prefer: Different Voices or Perfect Storm? It might be argued that there is no need to choose. The two models are not incompatible; they might each direct us toward different but equally necessary pieces of a complicated puzzle. For example, if it is true that men are more aggressive than women, then we'd have an explanation for why the heavily male field of philosophy is so tolerant of pugilistic behavior. It also might be argued that we should not choose, given the current state of the evidence. Proponents of each model can each marshal some evidence in favor of their respective approaches, and everyone ought to concede that we know far too little at this point to be able to choose between the two models on empirical grounds. Why not, then, let a hundred flowers bloom? Let proponents of each model develop it as far as it will go; we'll just see how things pan out.

Reasonable and conciliatory as that suggestion may seem, I don't think we should take it. I'll argue in this paper that we ought to commit ourselves to the Perfect Storm model and that we ought to abandon the Different Voices model. I realize that my saying this will have little effect on those who are committed to the Different Voices approach, and of course everyone has the right to study whatever he or she wants (modulo ethical acceptability). My hope, really, is to raise the salience of the Perfect Storm alternative in hopes of generating some tangible support for the research program it suggests.

My argument will cite a mixture of cognitive and practical considerations. First of all, I contend that the Different Voices model is implausible. No version of it, feminist or not, has stood up to empirical investigation, and Buckwalter and Stich's new iteration is no exception. But not only do I think that the Perfect Storm explanation is more plausible than the Different Voices approach, I think that the social value of research guided by the Perfect Storm will be considerably higher than that entailed by the Different Voices model. I want to be forthright about my appeal to both epistemic and non-epistemic values because I want to make clear that I understand the difference between them. It's one thing to assess the relative probability of two hypotheses' being true and another to compute the expected

utility of investigating the one rather than the other. I want to address the second issue as well as the first.

Chasing the Perfect Storm

Let me begin by explaining in more detail the way the Perfect Storm model is supposed to work to explain the gender disparity in philosophy. And let me do it by considering what I take to be the strongest objection to the model.[24] The Perfect Storm appeals, as I explained, to forms of sex discrimination that are broadly operative across society. The objection, then, is this: if the factors cited are indeed present in most or all social settings, how can they explain the very specific situation we see in philosophy? Consider, for example, this apparently minor bit of discriminatory behavior: when men talk, people make eye contact with the speaker more often and for longer periods of time than when women talk.[25] It's a pretty robust phenomenon; it seems to occur in almost all social settings and across occupations. And since women themselves follow the pattern of making more eye contact with men than with women, the generalization holds even in domains where women are in a majority. But if that's so, how could this explain the difference in demographics between psychology and philosophy?

The Perfect Storm proposes an answer to this question: the discipline of philosophy marks the site of a unique convergence, intensification, and interaction of discriminatory forces—just as a geographical site can serve as the point of convergence, intensification, and interaction of meteorological forces. The point I'm making is similar to the point made by Kimberlé Crenshaw in her discussion of "intersectionality." Discussing unsuccessful attempts by black women to win redress of discrimination against them as black women, Crenshaw argued that it is not enough to disarm such a charge to show that an employer has not discriminated against black *people* and that it has not discriminated against *women*. If all the black people hired or promoted have been men, and all the women hired or promoted have been white, it is at least plausible that racism and sexism have converged in a unique way to systematically disadvantage black women.[26]

This is not to say that the intersectional discrimination faced by black women in the workplace is a new, *sui generis* form of discrimination: "black-women discrimination." To so conceive it would be to impede an understanding of both racism in general and sexism in general. Rather, intersectionality should be understood in terms of a vector model. Race and sex—together with any other socially significant parameter of human variation—can be thought of as axes defining a multidimensional space. Different combinations of values can produce the *appearance* of *sui generis* forms of discrimination, but all discrimination is still analyzable in terms of interaction effects among the fundamental axes. The properties of race and sex themselves are now properly conceived in the way mass and acceleration are conceived—properties that are observable only in interaction with each other and that are separable only analytically.[27]

So let me be specific. There are, roughly, three ways in which familiar forms of gender discrimination could constitute perfect storms within philosophy: *convergence*, *interaction*, and *intensification*. I will explain each mechanism in turn and illustrate its operation with some speculative examples.

Convergence

Philosophy might attract a unique collection of biasing forces. Not all of the factors involved in gender unfairness are completely ubiquitous. Let's consider two factors that show variability: stereotype threat and gender schemas. Stereotype threat is presumably not a factor for women working in fields that are stereotypically associated with women's work, like nursing or education. It's apt to be present far more often when women are studying math or science. Within the humanities, it is likely not as large a factor for women studying literature as for women studying philosophy. Gender schemas are variable in a different way: they may be always present, always affecting male–female interactions, but their effects on social interactions can depend on variable features of the situation. A gender-schematic belief—or an "alief," as Tamar Gendler might call it[28]—that women are not much good at formal reasoning might not be engaged in a situation of collegial conversation between a man and a woman in an art history department, while it would very likely come to the fore if the conversation concerns some complicated issue about modality. Philosophy, then, might present more opportunities for gender schematic assumptions about women's incapacity for formal reasoning to converge with triggered stereotype threat than do other disciplines in the humanities.

Interaction

Once factors converge, they may interact. Consider how gender schematic thinking might interact with stereotype threat. Let me return to the hypothetical conversation I imagined above, with a man and a woman philosopher discussing modality. The man's gender schema may dispose him to regard the woman—quite unconsciously—as unlikely to be his peer in technical or abstract areas. Now suppose the woman says something unexpected or something that the man does not immediately understand. He may, because of his gender schematic "alief," explain his own incomprehension in terms of his interlocutor's ignorance or inability, and he might respond to her by rehearsing elementary background material—a reaction we may suppose to be a sincere effort to bring her up to speed. For her part, the man's apparent *non sequitur* ("Why is he telling me all this?") might engage the woman's own gender schema ("Maybe I got all of that stuff wrong"), triggering a bout of stereotype threat that momentarily distracts her, causing her to lose the thread of the conversation. The result, in this case: the man's view that the woman needs tutoring is confirmed, since she didn't seem to

understand the elementary material he was rehearsing, and the woman's anxiety about her abilities is validated despite her sense of frustration at being treated like an undergraduate student.

Intensification

A third way philosophy can create a Perfect Storm is if the discipline serves as an *intensifier* of certain discriminatory trends. Here's an example of how this might work. Consider the matter of service work within academia: hiring committees, governance bodies, "special projects" (e.g., compiling a list of possible "revenue generating" plans, applying for internal grant money for a departmental project), departmental "housework" (running the coffee collective, arranging receptions and social events), representing the department at official functions (convocations, graduations, awards ceremonies), and so forth. Such work counts for very little in the context of faculty evaluation—tenure, promotion, merit raises, and so on—and, I contend, is not nearly as highly valued as research work. (I do not assume that this is wrong.) There is evidence—from systematic studies as well as anecdotal reports—that women take on more service jobs, and spend more time performing service, than men do.[29] To the extent that women spend more time and effort on service work, they will be disadvantaged at evaluation time relative to men. They will have taken time that could have been spent on research and teaching, and devoted it instead to the sort of efforts that, even if successful, are largely invisible.

So much appears to be true across the academic disciplines. But philosophy might intensify the detrimental effect of service work on women, in several ways. First, because women are underrepresented in philosophy, there are fewer of us to do service work for and within our departments. Women in philosophy may find themselves, accordingly, called on more frequently than their male colleagues to serve on committees where diversity is perceived to be important. (Here, as many women have noted, we are victims of our own success!) Second, the disparity in the valuation of service relative to research may be higher among philosophers than among other academics. If so, women in philosophy will suffer a greater decrement in prestige in virtue of their service work than will women in other disciplines. Finally, the disciplinary values of philosophy may make the costs of doing certain kinds of service higher than just the cost of time lost to research. If women are working "behind the scenes" in much of departmental life, they may not be engaging in the sort of informal activity that heightens one's visibility and prestige within a philosophy department, like engaging visiting speakers in conversation during receptions or hanging out with colleagues and graduate students to "talk philosophy."

Let me develop a few more examples, citing biasing factors that have been shown independently to be present with academia, and then explaining how these factors might converge, interact, or be intensified within the discipline of philosophy.

Implicit Bias

Women academics are very likely to have their work systematically under-valued. Multiple studies have shown that academic papers and professional CVs are rated more highly if they carry a man's name than if they carry a woman's name.[30] An obvious—if partial—remedy to this particular problem is to use anonymizing practices as far as possible. It is not always possible; job applicants, for example, must include letters of reference, and it would be difficult (though maybe not strictly impossible) for referees to avoid any indication of the candidate's gender while still providing sufficiently useful information about the candidate's performance. However, mutually anonymous refereeing is not difficult to implement for journals and conference organizers. Yet not all philosophy journals follow this policy, and in a couple of instances, editors have been resistant to calls for the implementation of such policies.[31] In my experience, the reasons given vary: some editors say they do a lot of "bench rejections" in order to get decisions out quickly and to save their referees' time. I've also heard the worry expressed that if authors are not known to reviewers, a paper submitted by an important person in the field might get rejected, depriving the philosophical world of knowing what the important person's views are. (Another consequence not often mentioned: such a rejection might embarrass the journal or its editors.) I am not questioning the sincerity or the integrity of editors who give such reasons; these reasons may be fully legitimate. My point here is simply that if philosophical journals are less apt to adopt this proposed reform than are journals in other disciplines, we have a case of philosophy intensifying the effect of background biases.

Here's another way in which gender schematic biases could be (and, I strongly suspect, are) intensified within philosophy. Biases of this sort are typically unconscious—we often don't know they are there, and we are not good at recognizing when they are influencing our behavior. The literature in psychology on the operation of unconscious biases of all sorts (we prefer products placed on the right side of the supermarket shelf) is robust; evidence of the existence of biases specifically about socially salient categories like race and gender is very strong. Anecdotal evidence, however, suggests that philosophers are particularly apt to see themselves as immune from such distortions—to suffer from what psychologists call "over-confidence bias."[32] In my experience, philosophers are quite ready to allow that *other* people are affected by irrelevancies like the pitch of a candidate's voice, or a stereotype that links prettiness with vacuity, but not *them*. Philosophers, I suspect, broadly regard themselves as smarter than others in the humanities and think of themselves as particularly sensitive to fallacious or ungrounded reasoning. (And I do not exempt myself from this indictment.) If I'm right about philosophers' attitudes, then not only will philosophers be intractable about instituting reforms in evaluative practices, they will be *more* susceptible to the unconscious biases that they do have.

Conflicts Between Academic Norms and Gender Norms

There are many lines of work in which the criteria for good performance require a worker to act in ways that violate norms of femininity. This appears to be true to a large extent in at least some areas of the academy. A good example of this kind of conflict is the case of the relative valuation of service work and research work, described above. But let me add some detail. I speculate that women in academia receive a double message. One message, that research is the most important thing they can do with their time (perhaps with teaching a close second), is pretty explicit. The relative unimportance of service is frequently encoded in the institution's standards for tenure and promotion, for example. But the other message that I think academic women receive is the one that women receive pretty consistently throughout society—that as women, they have a special obligation to attend to the nitty-gritty details of life, to do the "housework," as I called it above. Within academia, this translates into service work. I predict, then, not only that academic women will receive more requests to perform service work than men do but also that they risk more disapproval if they decline. (And of course, it must not be forgotten that women are themselves affected by gender schematic thinking; they may have internalized gender norms that make service work seem obligatory and that make them personally uncomfortable in turning down requests or foregoing opportunities to perform service. Mentoring could potentially be very helpful here, but only if the environment is such that women will not be *externally* punished for following the male pattern of time allocation.) If all this is correct, then women in academia face a double bind—they are penalized in one way or another however they negotiate the demands of service and scholarly work.

How exactly might philosophy intensify this bind? My impression, gleaned from a career spent at a variety of academic institutions, is that philosophers value service even less than do academics in other disciplines. I would predict that philosophers are less likely to be active in faculty governance, less likely to be present for institutional ceremonies, and less likely to be involved in support activities. (Part of my evidence for this claim is the number of times I have been asked "especially" by a department chair to do X or to show up at Y because "it will look bad if no one from philosophy is involved.") I could certainly be wrong about this, but it seems to me that philosophers hold themselves especially aloof from this sort of work and even look vaguely askance at those of their colleagues who do it. Women in philosophy, then, may be asked to do more service work than women in other departments (due to our relatively small numbers), but then penalized more heavily for doing it.

Another clash between academic and gender norms that is apt to be a big factor concerns "work/life balance"—generally a matter of balancing family responsibilities with professional ones. Women, once again, are subject to a gendered norm that assigns to them primary responsibility for childcare, elder care, socializing, and housework. These gendered expectations are frequently

institutionalized, as when women, but not men, are offered parental leave. But even in places with progressive personal and family leave policies, women may be more apt than men to take advantage of them. And here again, the disciplinary culture of philosophy may be especially punishing to women who must keep "regular hours." Philosophy places a high premium on face-to-face contact (what I refer to as "schmoozing" above): colloquium talks, conferences, and late nights at the bar. Revered philosophers are often notorious for losing track of time (and much else) in the intensity of philosophical conversation. The unbroken and single-minded focus that characterizes the philosophical encounters I have valued most in my own career are much harder to come by if one has regular and non-negotiable family demands to figure in.

Clash Between Gender Norms and Specific Disciplinary Norms

This may be the most important element of the Perfect Storm. Philosophers are notorious among academics in other disciplines for what these others regard as our "pugilistic" style of discourse. This may not be fair—it is one thing to be argumentative and another to be aggressive or hostile. Still, our disciplinary practice privileges a habit of contrariness, even when the overall aim is constructive (we play "devil's advocate"). Professional papers are often centered on critical points, and we expect each other to take account of extant or likely objections when we present our positive views. Questions after a philosophy lecture are very apt to be challenges to some aspect of the speaker's argument.

The personal characteristics that make one good at this sort of intellectual activity are qualities like assertiveness, persistence, ingenuity, tenacity, and—well, let's call it "insensitivity" to various norms governing conversation in other domains. Personal qualities that are gender-normal for women, however, are at odds with these. Women are generally expected to be deferential, pleasant, and supportive. Women who are contentious, who interrupt, or who talk for (what is perceived to be) a long time are heavily sanctioned. A woman in philosophy thus confronts another double bind. If she respects the gender norms, she is apt to be dismissed intellectually; whereas if she acts the way philosophers generally act, in violation of the gender norms, she risks being perceived as especially rude or domineering.

This example, by the way, makes vivid the differences between the Perfect Storm model and the Different Voices model. Recall Moulton's suggestion about the prevalence of the "Adversary Method" in philosophy. Her view presumed that women, as a group, were uncomfortable with a contentious style of interaction. If Moulton is right, then if there are women who are outliers—women who enjoy, and are good at, the kind of argumentative exchanges for which philosophy is notorious—such women should do very well in the field, indeed, as well as men do. The variance in professional success among women should be largely predicted by variance in individuals' tolerance for intellectual "contact sports." But the Perfect Storm model makes no such prediction. On the Perfect Storm model,

women can be quite heterogeneous in their preferred discursive styles and still all be affected in a negative way by the conflicting norms that converge within philosophy. The Perfect Storm model predicts that women who *act* like men will precisely *not* therefore be *perceived* or *treated* like men: the woman who interrupts frequently may be sanctioned more quickly or more heavily than the man who acts the same way.[33] Variance in discourse style, then, would not explain the variance in professional success for women. On the Perfect Storm view the normative atmosphere has *some* effect on every woman regardless of her intrinsic temperament.

There is another way that the somewhat martial discursive norms of philosophy can interact with gender norms. To the extent that philosophers do see philosophical disputation as a battle waged against an opponent, there may be a special humiliation for men philosophers in "getting beaten by a girl." This possibility of occasioning such humiliation can create a special kind of jeopardy for women in philosophy, particularly young women. I have several times witnessed a man's wounded pride interact nastily with run-of-the-mill sexism to "disarm" a woman interlocuter: in each of the three cases I can call to mind, the man, "defeated" by a woman in a philosophical skirmish, made a point of calling attention to the woman's physical appearance: "I didn't know such a pretty girl could be so ferocious!" "You know, you aren't very attractive when you argue like that." And, interestingly, the opposite: "You have no idea how sexy you look when you get all serious."

Finally, let me say something about the valuation of ingenuity within philosophy. One of the most marvelous things one can do in philosophy is to come up with a *novel* argument or objection, one that evinces a new insight or a reconceptualization of an old problem. One of the things about novel ideas, however, is that people do not always understand them at first. What that means is that the experience of hearing a novel *good* idea may—at least initially—be qualitatively identical to the experience of hearing a *confused* idea. One's response to that experience is going to be colored by one's estimation of the probability that one is oneself confused or uncomprehending versus the probability that the speaker was not making sense. I contend that if one rates the speaker as highly likely to know what he (or she) is talking about, the auditor is going to work harder to understand what the speaker is saying than otherwise. But if the competence of the speaker is at issue, then the auditor may take his (or her) own difficulty in understanding as signifying confusion on the speaker's part.[34]

At the next stage of a philosophical conversation, things will go differently depending on how the auditor has resolved this issue. The auditor who judges that the difficulty is the auditor's own will aim to understand the idea. He or she will further engage the speaker, asking clarificatory questions, or spelling out what the auditor finds puzzling. Conversational feedback of this sort will help the speaker convey his (or her) idea more effectively. But the auditor who surmises that the idea is not worth much may well respond differently, with dismissive or condescending questions, or may simply cut off the conversation altogether. The speaker

who meets this response will be far less able to make the novel idea clear to the auditor. If gender schematic thinking makes auditors more inclined to attribute their experiences of incomprehension to a female speaker's confusion than to their own limitations, then women philosophers will get both less supportive feedback about, and less help with the development of, their novel ideas.[35,36]

There is, finally, a kind of culture clash between the disciplinary culture of contemporary analytic philosophy and feminine gender norms. This clash is particularly apparent in social and quasi-social settings, where male philosophers are apt to cluster together and talk shop, while women philosophers feel a sense of social obligation to circulate and to keep to topics of general interest.[37] In my experience, when there are non-philosophers present at a departmental gathering, it will likely be the women philosophers who are talking to them. (Of course, since most philosophers are male, the non-philosophers are very apt to be women.) Obviously, if women philosophers follow this pattern, and men philosophers tend to "talk shop," women will once more be absent from professionally important interactions.

The pattern I describe also reflects what I think of as—for want of a kinder term—the "nerdiness" of philosophy. Philosophy provides the adult equivalent of the garage science lab, a place where arcane interests can be pursued with single-minded intensity, safe from the demands of ordinary social life. If such enclaves are almost exclusively male, men who inhabit them are likely to be uncomfortable with women, and uncomfortable, in particular, with women who share their arcane interests—at least if the gender of those women is highly visible. At the pre-adolescent level, girls who have wanted to pursue interests in sports and science have, at least up until a couple of decades ago, had to endure—or embrace—the label "tomboy" if they wanted to join one of these enclaves, effectively de-sexing themselves as a cost of entry. Puberty renders such efforts moot.

If I am right that many men philosophers are uncomfortable "doing philosophy" with women, for any of the reasons I've offered, then there may be some truth to an interesting observation made by an eminent woman linguist with whom I discussed this topic. Instead of complaining about the combative nature of philosophy, which is the theme I have come to expect from non-philosophers, this linguist said that, in her experience, men philosophers were not hard *enough* on their women students. She said that the men she observed tended to pull their punches when talking to women, with the result that women did not get the kind of practice in argumentation they'd need to survive in the wider philosophical world or the kind of critical feedback they'd need to improve their work.[38]

Against the Different Voices Model

I turn now to Different Voices, the other model for explaining gender differences in philosophy. I remind the reader that I will be discussing the overall social value of focusing research in this direction. For that purpose, we must consider more than just the antecedent probability that the model is correct. I will argue that

this probability is quite low and that Buckwalter and Stich's research give us no reason to think otherwise. But I also intend to point out some significant risks to pursuing research along these lines. I'll start with the risks.

Misinterpretation of Claims of Gender Differences

As I explained earlier, it is not only men who have proposed that gender differences might explain the dearth of women in philosophy. But despite the fact that many women philosophers—indeed, many feminist philosophers—have defended some version of the Different Voices model, many other women philosophers reject it. Why? The claim that gender differences exist does not have to be sexist—that is, it does not have to reflect unsubstantiated stereotypes, and it need not be the product of pernicious motives. Nonetheless, such claims have, as a matter of fact, almost always served conservative or reactionary purposes; most often they have been used to rationalize discrimination or to justify inaction about it. Women are right to get their guard up when a claim about gender differences is made—whatever the specific content of the claim, it's apt to be used against them somehow.

At the very least, claims of gender difference are often dangerously misinterpreted. Two misinterpretations are particularly common. First is the paired fallacy of thinking (first) that any robust difference between the genders must be "natural" and then thinking (second) that anything that is "natural" is immutable. If it is reported that women tend to rank family ahead of work when they prioritize life goals, while men rank work ahead of family, many people[39] will immediately conclude that these differences in stated priorities reflect "natural" differences in values and preferences between men and women—due, perhaps to hormonal differences or to different levels of androgenization of the fetal brain. It will then be inferred that, since the differences in values are "natural," there is nothing that can—or nothing that *should*—be done about them. This whole pattern evinces a fundamental misunderstanding of the roles of nature and nurture in the production of a phenotype—a confusion between the analysis of variance within a population and the analysis of "causal force" (if such a notion even makes sense).[40] Nonetheless, this is a very, very common way of hearing claims about gender differences.

There is another problem that may be at work, too. I have lately become interested in the semantics of generic claims, for example, "birds lay eggs" or "ticks carry Lyme disease." Sarah-Jane Leslie has argued that the interpretation people give to claims of this sort is affected by the degree to which the generic category is *essentialized*.[41] "Essentialize" in this context refers to a robust psychological pattern of reasoning about kinds: roughly, the presumption that all members of the kind share a fundamental and explanatory nature, which licenses broad generalizations about all members of the kind and underwrites projections of properties observed in one member to other members of the kind.[42] When highly essentialized kinds appear in the context of generalizations, the generali-

zations are more likely to receive a generic interpretation. One feature of generic interpretation is that generalizations will be accepted even in the face of obvious and numerous counterexamples, making them quite resistant to disconfirmation. Some kinds are much more readily essentialized than others: animal kinds far more than occupational kinds, for example. Sex-gender kinds are extremely subject to essentialization, and so one would expect that claims about men and women are highly likely to be interpreted generically.

Now—what happens when generic terms occur in *comparative* contexts, for example, "men are better than women at math?" This question appears to be wide open; there is little consensus among linguists and philosophers of language about the logical form and truth-conditions of such comparative claims. For example, consider the question whether a claim like the one above should be construed as a claim about *distributional* facts, such as facts about the relative *numerical means* for men's and women's mathematical performance. Most of the people I have informally surveyed construe the claim that way, and it seems to be the way Buckwalter and Stich intend their claims about gender differences to be understood. But Bernhard Nickel argues that a difference in the respective means for groups is not always enough to make a generic comparative true. He contrasts what he calls "shift" cases with "sandwich cases."[43] In a shift case, all of the highest achieved scores would belong to men, although there could be a significant degree of overlap between the categories at lower levels. In a sandwich case, there would be women at the higher end and at the lower end, but at the intermediate range, the scores would belong almost entirely to men. The mean scores for men and for women could be identical between a shift case and a sandwich case, but Nickel presumes that we would judge the generic comparative claim to be true in the shift case, and false in the sandwich case.

At any rate, I have a suspicion—which I am beginning to investigate, in collaboration with Leslie and Marjorie Rhodes, and with Sandeep Prasada—that many people interpret generic comparative claims in a completely different way. I speculate that we have a tendency to convert generic comparative claims that involve scalable properties into contrasting generic claims about categorical properties. Thus, the comparative generic claim "Men have more upper-body strength than women" is interpreted as meaning "Men have upper-body strength and women do not have upper-body strength." I first suspected that something like this was going on when I was discussing with my undergraduate students an argument for retaining the combat exclusion in the U.S. military.[44] The argument went like this: combat requires enough upper-body strength to dig a foxhole in frozen ground. Women have less upper-body strength than men. Therefore, women are unsuited for combat. The fallacy I was trying to point out was the fallacy of drawing conclusions about the absolute *amount* of upper-body strength a woman had just from the claim that she has less than a man. What I discovered, however, was that many of my students were hearing the comparative claim as *men have upper-body strength and women don't*. Since I noticed this and discussed it with Leslie and others, additional examples have flooded in.[45] If I'm right that we all

have a habit of interpreting generic comparatives this way, and if Gelman and others are right that gender is highly essentialized, then it's all but inevitable that claims about gender differences will reinforce the construction of gender schemas in terms of *complementary* powers and properties for men and women.

Prior Claims about Different Voices Have Not Held Up

This is a reason for skepticism that a Different Voices model will provide an explanation of the gender disparity in philosophy: that similar claims have simply not held up in the past. I trust that no one now takes seriously such casual and empirically ungrounded claims as Kant's assertion that women are "scarcely capable of principle." But better motivated and more specific claims about gender differences in cognition have fared no better. Consider the fate of Carol Gilligan's theory of women's moral reasoning, and of the research it spawned.

As I explained earlier, Gilligan rejected the idea that such differences showed women to be less ethically mature than men and argued instead that they pointed to deficiencies in the view of moral development on which the test was based. Gilligan developed her theory of the two distinct "voices" in moral reasoning by analyzing the responses of two children, a lower-scoring girl (Amy) and a higher-scoring boy (Jake); Gilligan concluded that each child was appealing to one of two different and incommensurable dimensions of moral evaluation—*justice* and *care*. Kohlberg's seven-stage scale of moral development, she argued, was sensitive only to the first, and Jake's relatively high score reflected his focus on the conflicts among rights. Amy, however, found the interpersonal aspects of the situation more salient and compelling, and sought solutions that would restore community. Jake treated the dilemma situation as an "algebra problem" and so found it easy to cite general rules. Amy's commitment to the restoration of community was necessarily holisitic and complex. She could not convey the moral maturity of her reasoning within the confines of the assessment paradigm. So Gilligan argued.

Gilligan's work inspired other researchers to look at cognition more generally to see how deeply gender inflected the activity of thinking. In 1986, scholars Mary Belenky, Blythe Clinchy, Nancy Goldberger, and Jill Tarule published their book *Women's Ways of Knowing* (for which they won the 1987 Distinguished Publication Award of the Association of Women in Psychology).[46] Employing a qualitative methodology similar to Gilligan's, Belenky et al. identified five "knowledge perspectives . . . from which women view themselves and the world, and make meaning of their lives."[47] They went on to suggest that these differences might account for difficulties women had in many traditional academic areas: "We observed that women often feel alienated in academic settings and experience formal education as either peripheral or irrelevant to their central interests and development."[48]

The problem, however, with Gilligan's work, and later with that of Belenky et al., is that subsequent research showed that the much-trumpeted gender differences were simply not there. Two meta-analyses conducted by L. J. Walker of

studies applying the Kohlberg paradigm to measure moral reasoning skills showed no significant difference between males and females.[49] Most studies analyzed showed no significant differences at all between the genders; of the others, about 6 percent showed higher scores for women, and about 9 percent for men. Of those studies, the ones showing higher scores for men involved samples that were more heterogeneous with respect to educational level and occupation than those showing higher scores for women. Walker concluded that differences in education accounted for more of the variance than gender differences. Thoma found an even stronger effect of education in his meta-analysis of studies using the Defining Issues Test of moral reasoning, and a meta-analysis by Bebeau and Brabeck of studies using only dental students as subjects found no significant difference between men and women, though the mean scores for women were slightly higher.[50] So strong was the case against gender differences in moral reasoning that by 1988, Gilligan herself had repudiated the claim that women reason morally from a different perspective than men, and retreated to the claim that the care perspective was more strongly *associated* with women and that it had been neglected in moral theorizing for that reason.[51] (The fact that not even the original champion of the idea that there are gender differences in moral reasoning still defends it has done nothing to quash the idea in the public—or the scholarly— mind. The claim that women and men think differently about moral issues has been repeated in every *Newsweek* and *Time* story on gender differences for the last two-and-a-half decades. And at least as of 1997, it was reported in standard college psychology texts.[52])

Similarly, claims about different cognitive styles between men and women simply failed to pan out. In their review of existing literature on "women's ways of knowing," Mary Brabeck and Ann Larned identified serious methodological problems in the few studies that claimed to find gender differences in cognition generally, and cited many other studies that ought to have found such differences if they exist, but did not.[53]

There is in this history a cautionary tale for Different Voices research in general: the "patterns" and "trends" that Different Voices models are invoked to explain generally turn out not to exist. My bet is that the "gender effects" reported by Buckwalter and Stich will not hold up either. It's not just past precedent that I'm relying on in saying this. I have specific reasons for thinking that the differences they've found are artifactual.

Specific Concerns about the Buckwalter and Stich Model

There are several grounds for concern about the specific version of the Different Voices model that Buckwalter and Stich develop in their paper. Their contention is that, first of all, there *is* a gender difference in reactions to philosophical thought-experiments. There is reason to be skeptical about this alleged finding. Buckwalter and Stich report and discuss findings of significant gender differences in thirteen studies. But there is not much reason to think that these studies are

representative of all the philosophical thought-experiment studies out there. The particular studies Buckwalter and Stich cite were *selected* for discussion *because of* this finding. Buckwalter and Stich are forthright about their methodology—they wrote to "a number of researchers who had done work on philosophical intuitions" asking if they had found gender differences in their own research, or if they knew of data or work on gender differences. We are not told how many inquiries were made, or how many researchers (if any) reported findings of no effect, or how things turned out with researchers who were not contacted by Buckwalter and Stich.

Even in the work that is surveyed, however, the picture that emerges is much more equivocal than Buckwalter and Stich's confident conclusions suggest. In one case, a researcher (Geoffrey Holtzman) reported the results for nine thought-experiments. He reports finding significant gender differences in three of the cases, but no significant gender differences in the other six. We are given this detail in a footnote; in the text, Buckwalter and Stich say only, "It is important to note that Holtzman also collected data on participants' intuitions about a number of other philosophical thought experiments and found no significant gender differences." It also turns out that the researchers whose work initially drew Buckwalter and Stich's attention, Starmans and Friedman, have extended their study (of people's intuitions about Gettier cases) and have conducted "a number of additional experiments" in which they have apparently found no gender differences. Buckwalter and Stich say this: Starmans and Friedman "found that roughly half of both male and female participants attributed knowledge to the protagonists in their Gettier vignettes" (B & S, 7).

Buckwalter and Stich are nonplussed by these conflicting data. In response to the newer Starmans and Friedman findings, they say "It is clear that there is still a lot to learn." Later, in a section reviewing reported gender differences in "preferences, decisions, and behaviors" from literature in social psychology and behavioral economics, they say this:

> Our theme in section 3 has been that there are indeed gender differences in intuitive responses to many philosophical thought experiments, some of which are large, unexpected, and dramatic. Though as we have noted repeatedly, there are also a number of studies of philosophical intuitions that do not find gender differences. To the best of our knowledge, there is currently no good way of predicting where these gender differences will be found. (B & S, 24)

Buckwalter and Stich appear to be taking the position that when a study shows a significant gender difference, then there is a gender difference; when a different study shows that there isn't, then there isn't. Thus, they conclude, men and women think differently about some thought-experiments, but not about others, and the studies reviewed tell us which are which.

But this is wrong; to defend the claim that gender differences exist *in general* with respect to any one of these thought-experiments, we would need more than a single experiment. A finding of a significant difference on a single study—especially if the difference was not predicted, and thus not subject to controls—

tells us very little. This is one of the lessons of the history of research on the "different voice" in moral reasoning. What's really needed—as it was needed in the case of the "different voice"—is a meta-analysis. That would be very difficult to do, of course, using only the studies collected and reported here by Buckwalter and Stich, given the lack of uniformity in experimental design and experimental materials. At the very least, a large-scale study using a single paradigm and controlling for possible confounds should be undertaken before anyone leaps to the large-scale claim that "there are gender differences in intuitive responses to many philosophical thought-experiments" (24).

There are, furthermore, reasons to be skeptical that the differences found in the studies surveyed by Buckwalter and Stich represent *philosophical* differences between men and women. The materials used in these studies surveyed involve relatively lengthy verbal descriptions of complicated scenarios. In some of the studies, the differences between men and women appear to be controlled by extremely small and philosophically insignificant differences in detail. For example, Zamzow and Nichols found gender differences in judgments about a "Trolley" case—a case in which an out-of-control trolley will run over five people caught on the track, unless the train is switched onto a second track, on which only one person is caught. Subjects were asked to indicate the degree to which they agreed or disagreed with the statement "It is morally acceptable for me to pull the switch." Zamzow and Nichols did find some gender differences, but they also found that the differences *flipped* depending on how the single person on the second track was identified. Men judged the switching to be more morally accept-able than women did when the person was described as a "stranger," but less morally acceptable when the person was described as a "12 year old boy." Men thought it was less morally acceptable if the person was one's own brother; women thought it was less acceptable if the person was one's own sister. It seems to me extremely implausible that such patterns of judgment reflect differences in any stable or considered *moral* views—is it true that women and men separately think that it makes a moral difference whether one knows the age and gender of a stranger, or that it's OK to sacrifice a relative of a different gender but not one of the same gender? It is far more likely that the results reflect distracting effects of the experimental materials.

The suspicion about the robustness of the gender differences found in various of the studies reported by Buckwalter and Stich is reinforced by a study undertaken by Yuliya Chernykhovskaya.[54] Chernykhovskaya presented to her subjects (276 Rutgers University undergraduates; 132 females, 144 males) vignettes derived from those in five of the studies reported by Buckwalter and Stich to have found significant gender differences. She made only superficial changes to the wording of the vignettes. Here, for example, is Holtzman's wording of the "physicalism" thought-experiment:

Suppose you meet a man from the future who knows everything there is to know about science. He tells you that he doesn't like apples, and says that though he has never eaten

one, he has figured out what apples taste like just by studying the relevant science. *Could he know what apples taste like without ever having eaten one?*

And here is Chernykhovskaya's rewording:

This is about a person from the future, named Zion, who knows everything there is to know about science. Zion tells you that apples do not taste good, even though Zion has never eaten one. Zion says that he knows what apples taste like just by studying the science of apples. *Could Zion know what apples taste like without ever having eaten one?*[55]

Chernykhovskaya found no gender difference in answers to this particular thought-experiment (24 percent of women said yes compared with 23 percent of men; N = 55, 25 females, 30 males). In general, she was unable to replicate the findings of gender differences. She concludes: "While there were some similarities to the patterns previously found, the comparisons were generally inconsistent. Overall, it appears that the evidence favoring sex differences does not appear to be robust across changes in syntax."[56] One might object that the changes Chernykhovskaya made to the wording of the vignettes renders her results incomparable to those of the experimenters who conducted the original studies. But of course, if sweeping conclusions are to be made about women's and men's different reactions to "thought-experiments," and if such differences are supposed to explain the demographics of the profession, then we would expect the differences to be elicited by the *content* of the cases, and not by small differences in the way the cases are presented. After all, even if students are exposed to these thought-experiments in their canonical forms, via the original texts in which the thought-experiments were presented, many students will also hear them for the first time from their professors, and different instructors will surely have different ways of presenting the cases. (Moreover, none of the experimental materials in studies reviewed by Buckwalter and Stich utilized the canonical presentations of the cases.)

Finally, every study showing a significant difference between men and women showed this difference on individual items. Significance in these cases depended entirely on the large number of subjects. But the preferred pattern in psychology displays an effect through subject *and item*. That gender differences come and go, depending on the particular thought-experiment tested, should further increase suspicion that the effects reported to be of gender are actually attributable to idiosyncrasies of the items.

There are other sorts of difficulties when we look at the way Buckwalter and Stich propose to link the alleged gender differences in philosophical intuition to the underrepresentation of women within philosophy. On their model, it is women's experience of *disagreeing* with the judgments presented to students as "correct" or "standard" that causes them to feel negatively toward philosophy: either they infer that they are no good at philosophy (because they don't have the "right" intuitions), or they retain confidence in their judgments but decide that philosophy is for the birds. This is an interesting hypothesis, and I would not be

at all surprised if things of this sort sometimes happen. But Buckwalter and Stich have a problem in linking this hypothesis to their results: the findings they cite do *not* show women to be uniformly at odds with received philosophical opinion.

In the case of Violinist, Gettier, and "Magistrate and Mob," the women in the reported studies did indeed disagree with what was, according to B & S's informal poll, the dominant intuitions of professional philosophers. But in Compatibilism, Brain in the Vat, Chinese Room, and Twin Earth, the women were *more* in tune with the philosophical mainstream than were men. (There's an irony here: Violinist was a case invented by a woman—Judith Jarvis Thomson. Gender differences flip-flopped in another female-designed case, Trolley, as I explained above, depending on the identity of the single person being considered for sacrifice. The Trolley thought-experiment was devised by Philippa Foot. Today the world's leading expert on the case is another woman, Frances Kamm of Harvard University.) Third, if disagreement with received opinion is supposed to turn women off philosophy, it's surprising that women show disagreement more in the ethics cases than in the metaphysics, philosophy of mind, and philosophy of language cases, since there are a higher percentage of women in ethics than in the other sub-field. Finally, it is difficult to see how some of the reported gender differences can fit into the B & S model at all. Many of the thought-experiments for which Buckwalter and Stich report data involve issues on which no philosophical consensus exists: since they do not involve differences in summary judgments (divert the trolley or not?) but rather in *degrees* of approval or disapproval (*how* wrong would it be to . . . ?) I have noticed no robust philosophical consensus on such matters in the cases B & S discuss.

Buckwalter and Stich discuss the objection I raise here, and that others have apparently raised, and they believe they have a response. They appeal to the work of Carol Dweck on the different ways people conceptualize intelligence: the "growth" mindset versus the "fixed" or "gift" mindset. According to Buckwalter and Stich, Dweck presents evidence that women are more likely to view intelligence as fixed and as a "gift," whereas men are more likely to think of intelligence as an ability that can be developed and enhanced through personal effort. Given this difference, Buckwalter and Stich argue, it is likely that men and women will respond differently to the experience of a clash of intuitions between them and their instructors. Women will take such conflicts as indications that they don't have the philosophy "gift," while men will conclude that they need to work harder.

Furthermore, Buckwalter and Stich continue, the Dweck effect interacts with IQ (B & S, 36). The brighter the woman (as measured by IQ tests), the *more* likely she is to become discouraged when and if she confronts "confusing material." Thus, B & S speculate,

> So the impact of having intuitions that clash with those of one's instructors may tend to selectively discourage *bright women*. Thus when intuitions play a significant role in philosophical education, as the level of the course and the difficulty of the material increases, we might expect the men to excel, to get more encouragement from their

instructors, and thus to be more inclined to continue in philosophy, while the women will be more inclined to look elsewhere.

I agree that Dweck's work is, potentially, highly relevant to the question of why there are so few women in philosophy. However, its bearing on Buckwalter and Stich's specific hypothesis is hardly as clear as they suggest. Dweck has not claimed, as Buckwalter and Stich's summary suggests she has, that there is a *general* difference in mindset between girls and boys that stretches across academic subjects in general. Rather, she has argued that that there appears to be such a difference specifically with respect to math and science.[57] In order to extrapolate Dweck's findings from math to the subject of philosophy, one would have to assume that the subjects were alike in the respects that trigger the effects of mindset, and it's not at all clear that that can be done. One respect in which the subject is quite different from math, and a respect that is quite pertinent to the impact of "gift" thinking in girls' performance, is that girls typically experience math as easy during their years in elementary school and only begin to confront difficulty (and bad grades!) in middle or high school. There is no correspondingly pathogenic shift in philosophy, at least not in the United States. Here, typically, young men and women have their first academic confrontations with philosophy during college, with no record of past performance to set expectations.

But importantly, I do not need to deny that philosophy might pattern like mathematics for women. Even if Buckwalter and Stich are right that Dweck's conclusions apply to philosophy, it would still not be the case that her work *differentially* supports their Different Voice model over the Perfect Storm model. Whether or not we follow Buckwalter and Stich in taking Dweck to have discovered a domain-general tendency for girls and women to adopt a "gift" mindset, and whether or not we agree that philosophy is enough like math for the more limited generalization to hold, the overall result is simply that Dweck has revealed another component of a Perfect Storm. If women tend take "puzzlement and confusion" as indications of a lack of talent, then *any*thing that causes a woman to feel confused or puzzled in a philosophy class will be experienced as discouraging. And in philosophy, there's *lots* to be puzzled and confused by—there's no need to focus on *thought-experiments*. Philosophy could be an overall intensifier of the Dweck effect, as the Perfect Storm would predict. It is, furthermore, easy to imagine how this intensified Dweck effect could interact with gender schematic thinking (on the part of both instructors and women students alike), and with stereotype threat, to create quite a toxic environment for women regardless of what they think about Twin Earth or the Violinist.

Another thing to consider is the reactions of philosophy *professors* to students whose intuitions differ from their own. It's possible, given the nature of our discipline, that professors often appreciate it when students voice disagreement, since such dissent can be the starting point for vigorous intramural debate. But it's also possible—and this is an especially important possibility to consider in light of the Dweck effect—that professors respond differently to disagreement when it's

expressed by women than when it's expressed by men. If Johnny gets an "Interesting . . ." while Susie's told she doesn't understand, that disparity may be far more important than the fact that either of them disagrees with the teacher. Indeed, I would like to know what difference it makes if the *instructor* accepts a "gift" model rather than a "growth" model. I speculate that philosophers themselves accept a gift model of success in their field.

Which Research to Pursue?

Buckwalter and Stich are to be applauded for acknowledging the problems with their research and with their model. But where they see a need for further study, I see a dead end, on a street in a very bad neighborhood. Here's my summary case for pursuing the Perfect Storm model rather than the Different Voices model.

(i) Many of the factors posited by the Perfect Storm model—gender schematic thinking, stereotype threat, and conflicts between gender norms and occupational norms—are known to be common throughout the worlds of school and work. There's good presumptive reason, then, to assume that these factors are operative within the world of academic philosophy, and it is well worth finding out if or to what extent this is so.

(ii) If, as seems likely, such factors are found to be present within philosophy, we'll need to do something about them, whether or not they turn out to explain the gender demographics of the field.

(iii) Some of the factors posited by the Perfect Storm are appealed to by (at least one version of) the Different Voice model. Research looking overall at students' reactions to classroom events and teacher reactions, rather than just at cases involving thought-experiments, would be more illuminating.

(iv) It would be difficult to design and implement the kind of research that would strongly support the claim that there is a gender difference in "philosophical intuitions" *tout court*. It would be cumbersome and time-consuming even to produce properly controlled and appropriately scaled replications of the findings of gender differences even with respect to individual presentations of particular thought-experiments.

(v) The preliminary data are equivocal; there is no strong reason to believe that the research will bear fruit. Moreover, the initial data do not support the model B & S propose.

(vi) There are dangers associated with claiming the existence of gender differences. Such claims are too readily accepted—evidence in their favor conform to essentialist thinking about gender, and to specific stereotypes about gender, and so may be accepted because of confirmation bias rather than a dispassionate examination of the evidence. Claims of gender differ-

ence, because of the generic interpretation likely to be triggered by the invocation of gender categories, are highly resistant to counterevidence, if such emerges. Such claims, finally, are apt to be misinterpreted in ways that prove detrimental to women—ways that encourage essentialist and biological determinist thinking.

(vii) It's not at all clear what interventions would make any difference if the Different Voices model turned out to be correct. As medical ethicists and practitioners have long observed, it is useless or worse—potentially psychologically or physically harmful—to test for conditions for which there is no treatment. Consideration of thought-experiments is apt to remain a part of philosophical methodology for some time; what can we do with the information that women's judgments are different from men's except *know* it?

That brings me to my final point. I began my discussion by pointing out that many conservative thinkers—prominent philosophers among them—have claimed that women's minds were not suited to philosophizing. These thinkers would agree with the claim that only a change in the discipline itself could alter the demographics of philosophy—but they would insist that any such change would be a change for the worse. The difference between the feminist defenders of difference and the anti-feminists thus lies in the implications they draw from the mismatch between women's minds and the demands of philosophy. The anti-feminist line says that if women can't (or won't) do philosophy, so much the worse for women. The feminist line says that if philosophy is not informed by women's minds, so much the worse for philosophy.

Buckwalter and Stich clearly side with the feminists, and I give them all due credit for their intentions. They believe that philosophical methodology needs reform, particularly with respect to the way in which it relies on thought-experiments the results of which are foregone conclusions. However, I don't think that Buckwalter and Stich can take for granted that the discovery of gender differences in philosophical intuitions would bolster their case. I, for one, would like to talk to some of the people with discrepant intuitions to find out more about how they're thinking—many of the responses suggest confusion and inconsistency rather than mere difference. If that's the right diagnosis, then it would be appropriate to treat their intuitions as simply incorrect. Consider a (hypothetical) study that showed that women and men had systematically different mathematical intuitions—perhaps a study that showed that women were less likely than men to believe that infinities come in different sizes or that two is a prime number. The correct conclusion to draw would be that women, for whatever reason, are handicapped in the doing of mathematics, not that mathematics must accommodate women's different way of knowing numbers.

Too many people still believe that women lack the brainpower to be good philosophers. To them, Buckwalter and Stich's findings are going to look like ammunition. I'm not sure that they'd be wrong.

Notes

[1] Many people have given me extremely useful feedback on this paper. I believe that the paper is much improved in consequence, but I take full responsibility for any remaining errors or confusions. I want to thank the following people, in particular, for their comments on earlier drafts: Nancy Bauer, Maya Eddon, Ned Hall, Sally Haslanger, Richard Holton, Hilary Kornblith, Rae Langton, Sarah-Jane Leslie, Heidi Lockwood, Joe Levine, Mari Mikkola, Chris Meacham, Eddie Nahmias, Georges Rey, Sarah Richardson, Jennifer Saul, Catherine Wearing, and an anonymous reviewer. I presented earlier versions of this paper at the Boston Area Workshop on Gender and Philosophy (WOGAP), at the Humboldt University Conference on Implicit Bias, and at the Yale Gender and Philosophy Discussion Group, and I want to thank my co-participants and audiences for their questions, criticisms, and helpful suggestions.

[2] See "Women Lead in Doctorates," *Inside Higher Ed*, September 14, 2010, http://www. insidehighered.com/news/2010/09/14/doctorates.

[3] Data drawn from the "Survey of Earned Doctorates" from the National Opinion Research Center of the University of Chicago, and reported at http://thesocietypages.org/socimages/2011/05/05/gender-composition-of-academic-disciplines-phds-in-2009/

[4] Authoritative data are surprisingly difficult to obtain—the American Philosophical Association does not collect demographic data of this sort—but handcounts of women faculty in the United States consistently put the percentage at less than 25 percent overall. Kathryn Norlock reported in 2007, for example, that 21 percent of employed philosophers are women (http://www.uh.edu/~cfreelan/SWIP/stats.html). The situation appears to worsen as the prestige of the institution rises. For 2008, Sally Haslanger reports a figure of 19.5 percent in the "top twenty" departments in the United States, based on ratings measured by, and faculty lists reported by Brian Leiter's *Gourmet Guide to Philosophy*. See Sally Haslanger, "Changing the Ideology and Culture of Philosophy: Not by Reason (Alone)," *Hypatia* 23, no. 2 (2008): 210–23. Wesley Buckwalter and Stephen Stich get a slightly lower count, 18.7 percent, based on a different analysis of the same data. See Wesley Buckwalter and Stephen Stich (forthcoming), in Joshua Knobe and Shaun Nichols (eds.), *Experimental Philosophy*, vol. 2 (New York: Oxford University Press).

[5] For example, see the "Idea of the Day" blog at *The New York Times*, October 2, 2009: http://philosophysmoker.blogspot.com/2010/11/why-we-should-care-about-women-and.html, the "New Apps" blog, http://www.newappsblog.com/2011/05/the-low-percentage-of-women-earning-phds-in-philosophy.html, and the "Thoughts, Rants, and Arguments" blog, http://tar.weatherson.org/index.php?s=women+philosophy.

[6] Buckwalter and Stich, *op. cit.* For the controversy, see the blog "Feminist Philosophers" (http://feministphilosophers.wordpress.com/2010/09/28/new-paper-gender-and-philosophical-intuition/).

[7] See Immanuel Kant, "On the Distinction between the Beautiful and the Sublime," in *Philosophy of Woman: An Anthology of Classic to Contemporary Concepts*, 3rd ed., ed. Mary Mahowald (Indianapolis, IN: Hackett, 1994), 102–12.

[8] Carol Gilligan, *In a Different Voice* (Cambridge, MA: Harvard University Press, 1982).

[9] Janice Moulton, "A Paradigm of Philosophy: The Adversary Method," in *Discovering Reality*, ed. S. Harding and M. B. Hintikka (Hingham, MA: D. Reidel, 1993), 149–64.

[10] See Code's *Epistemic Responsibility* (Providence, RI: Brown University Press, 1987), and *What Can She Know? Feminist Theory and the Construction of Knowledge* (Ithaca, NY: Cornell University Press, 1991).

[11] See Scheman's "Othello's Doubt/Desdemona's Death: The Engendering of Scepticism" (1987) and "Though This Be Method, Yet There Is Madness in It: Paranoia and Liberal Epistemology" (1992), both reprinted in her *Engenderings: Constructions of Knowledge, Authority, and Privilege* (New York: Routledge, 1993).

[12] Alison Jaggar, *Feminist Politics and Human Nature* (Totowa, NJ: Rowman and Allenheld, 1983); Linda Alcoff and Elizabeth Potter, "Introduction," in *Feminist Epistemologies*, ed. Linda Alcoff and Elizabeth Potter (New York: Routledge, 1992), 1–14; Iris Marion Young, *Justice and the*

Politics of Difference (Princeton, NJ: Princeton University Press); Nancy Fraser and Linda Nicholson, "Social Criticism without Philosophy: An Encounter between Feminism and Postmodernism," in *Feminism/Postmodernism*, ed. Linda Nicholson (New York: Routledge, 1989), 19–38.

[13] Andrea Nye, *Words of Power* (New York: Routledge, 1990); Jennifer Hornsby, "Feminism in Philosophy of Language: Communicative Speech Acts," in *The Cambridge Companion to Feminism in Philosophy*, ed. Miranda Fricker and Jennifer Hornsby (Cambridge: Cambridge University Press, 2000), 87–106.

[14] I am assuming, for ease of exposition, that individuals are three-dimensional and that properties are possessed by individuals at times. I do not think anything I say turns on this assumption.

[15] For discussion, see Brian Weatherson's entry "Intrinsic vs. Extrinsic Properties" in the *Stanford Encyclopedia of Philosophy*: http://plato.stanford.edu/entries/intrinsic-extrinsic/. Thanks to Maya Eddon for helping me get clear on this and for providing useful references.

[16] I think this expression, as it is used in common parlance, is many ways ambiguous. (See my "On the Notion of 'Human Nature' in Feminist Theory," in *Philosophy in a Different Voice*, ed. Janet Kourany [Princeton, NJ: Princeton University Press, 1997], 63–91, and "Natures and Norms," *Ethics* 111, no. 1 [October 2000]: 8–36.) But I deny that in any of its senses the term "natural" is synonymous with or is implied by "intrinsic."

[17] I say that dispositions are identical to their grounding categoricals in " 'Human Nature,' " but I no longer think this. The reason is that many dispositions are multiply realizable—there are many distinct categorical properties that could ground them. The thesis that multiple realizable properties are both real and distinct from their grounding (or "realizing") properties is key to my defense, elsewhere, of the autonomy of the mental. See my "Multiple Realizability, Projectibility and the Reality of Mental Properties," *Philosophical Topics* 26 (1999): 1–24.

[18] See, for example, Scheman, "Individualism and the Objects of Psychology," in Harding and Hintikka, *op. cit.*, and reprinted in *Engenderings*.

[19] Ibid.

[20] I mean, of course, intrinsic differences *other* than those that fundamentally support the classification of an individual as a man or as a woman. Clearly, the phenomenon cannot be even be described if there is no basis for making *that* distinction.

[21] http://oxforddictionaries.com/definition/perfect+storm. The term dates from 1936 but was made popular by Sebastian Junger in his book *The Perfect Storm: A True Story of Men against the Sea* (New York: Macmillan, 1999).

[22] Virginia Valian, *Why So Slow? The Advancement of Women* (Cambridge, MA: MIT Press, 1999).

[23] I believe that my model fits the approach taken by Sally Haslanger and Jennifer Saul in their recent work on this topic. See Haslanger, "Changing the Ideology and Culture of Philosophy," and Jennifer Saul, "Unconscious Influences and Women in Philosophy," forthcoming in *Women in Philosophy: What Needs to Change?* ed. Fiona Jenkins and Katrina Hutchison.

[24] This objection was made to me by Stephen Stich in conversation.

[25] Valian, *Why So Slow?*, 149–52.

[26] Kimberlé Crenshaw, "Mapping the Margins: Intersectionality, Identity Politics, and Violence against Women of Color," *Stanford Law Review*, 43, no. 6 (July 1991): 1241–99.

[27] This model of the ontology of discrimination and social identity is meant as an alternative to what Elizabeth Spelman has dubbed the "pop-bead" model of oppression, according to which race and sex are substantive characteristics that can be "popped on" to a generic—read: white male—human being in order to get non-paradigmatic kinds of people—black men (one bead), white women (one bead), or black women (two beads). See Elizabeth Spelman, *The Inessential Woman: Problems of Exclusion in Feminist Thought* (Boston: Beacon Press, 1988). What I say here about an alternative ontology is obviously just a sketch. But I hope to develop it fully in a future paper.

[28] Tamar Szabó Gendler, "Alief and Belief," *Journal of Philosophy* 105, no. 10 (2008): 634–63.

[29] See, for example, Joya Misra, Jennifer Lundquist, Elissa Dahlberg Holmes, and Stephanie Agiomavritis, *Associate Professors and Gendered Barriers to Advancement*, 2010. Report to the

Massachusetts Society of Professors Work-Life Committee. Available at http://people.umass.edu/misra/Joya_Misra/Work-Life_Research.html.

[30] Rhea E. Steinpreis, Katie A. Anders, and Dawn Ritzke, "The Impact of Gender on the Review of the Curricula Vitae of Job Applicants and Tenure Candidates: A National Empirical Study," *Sex Roles*, 41, no. 7/8 (1999): 509–28.

[31] I prefer not to name names here; I hope I may be forgiven this breach of scholarly norms. I do not mean to be impugning the integrity or goodwill of any journal editor, and indeed, I have not been as scrupulous about anonymous review in my own editing projects as I now believe I should have been. For some anecdotal evidence about the practice of some philosophy journals, and of philosophers' reactions to those practices, see the discussion of "blind review" on Brian Leiter's blog: http://leiterreports.typepad.com/blog/2012/07/should-authors-be-allowed-to-opt-out-of-blind-review.html

[32] For an informal overview, as well as scholarly references, see Daniel Kahneman, "Overconfidence," in Kahneman, *Thinking Fast and Slow* (New York: Farrar, Straus, and Giroux, 2011), 199–268.

[33] It is a well-documented generalization that women who mimic masculine styles do not garner the same reactions as men. See Valian, *Why So Slow?*, 127–36.

[34] Karen Jones discusses the interaction between an auditor's estimate of the probability of a piece of testimony with the auditor's estimate of the testifier's credibility. She argues that these two assessments should always be made independently. See Karen Jones, "The Politics of Credibility," in *A Mind of One's Own*, 2nd ed., ed. Louise M. Antony and Charlotte E. Witt (Cambridge, MA: Westview Press/Perseus Books, 2002), 154–76.

[35] Miranda Fricker argues that such dynamics amount to a kind of systematic injustice. See her *Epistemic Injustice* (Oxford: Oxford University Press, 2007).

[36] Some have questioned whether the process I've described is really unique to philosophy. As with all my conjectures, the matter is subject to empirical investigation. But my thinking is that in many other disciplines, especially within the humanities, a *novel* thought will not be so readily confounded with an *incoherent* thought. A counter-orthodox claim about history, for example, might garner scorn or ridicule for its author, but the *content* of the claim will be understood. But this is, as I said, an empirical matter.

[37] Notice that there can be, once again, a double bind in effect. If a woman feels no such sense of obligation and chooses to join those of her colleagues who are talking shop, she may be subject to disapproval by her colleagues or by their non-philosopher partners for neglecting what *they* implicitly regard as her social duty to help everyone feel included.

[38] The latter point is consonant with observations about majority evaluators' treatment of minority individuals, which tends to be positive but vague and somewhat hyperbolic. Such evaluations tend to be discounted by minority individuals, who suspect that they are motivated more by the evaluator's desire to appear unprejudiced than by the quality of the work. Such evaluations can be costly in work or study situations, since they deprive minority workers or students of the information they would need in order to make improvements. See Kent D. Haber, "Feedback to Minorities: Evidence of a Positive Bias," *Journal of Personality and Social Psychology*, 74, no. 3 (1998): 622–28, and Janet B. Ruscher, Devin Wallace, Kristin M. Walker, and Lindsay H. Bell, "Constructive Feedback in Cross-Race Interactions," *Group Processes and Intergroup Relations*, 13, no. 603 (2010): 603–19.

[39] Including economist Lawrence Summers and eminent psychologist Steven Pinker, both of whom should know better. See Lawrence Summers, "Remarks at NBER Conference on Diversifying the Science and Engineering Workforce," Harvard University, January 14, 2005; and Steven Pinker, "The Science of Gender and Science: A Debate; Pinker vs. Spelke," *The Edge*: http://edge.org/event/special/the-science-of-gender-and-sciencepinker-vs-spelkea-debate

[40] This distinction is explained, and the point driven home, by Richard Lewontin in his "The Analysis of Variance and the Analysis of Cause," *American Journal of Human Genetics*, 26 (1974): 400–11. For a detailed application of this point to the debate about the "naturalness" of gender roles, see my "The Concept of 'Human Nature' and Its Role in Feminist Theory," in *Philosophy in a*

Feminist Voice: Critiques and Reconstructions, ed. Janet Kourany (Princeton, NJ: Princeton University Press, 1998), 63–91.

[41] Sarah-Jane Leslie, "The Original Sin of Cognition: Fear, Prejudice, and Generalization." Forthcoming in *The Journal of Philosophy*.

[42] See Susan Gelman, *The Essential Child: Origins of Essentialism in Everyday Thought* (New York: Oxford University Press, 2003).

[43] Bernhard Nickel, "Generic Comparisons," *Journal of Semantics*, 27, no. 2 (2010): 207–42.

[44] Andrew J. Gatsis, "Women Can't Be Warriors," *Raleigh News & Observer*, August 26, 1992, 11.

[45] See, for example, Gatsis (ibid.) and also "For Speediest Athletes, It's All in the Center of Gravity" <http://www.sciencedaily.com/releases/2010/07/100712103349.htm>, and Gina Roberts-Grey, "How Birth Order Can Affect Your Finances" <http://www.bankrate.com/finance/personal-finance/birth-order-can-affect-finances.aspx?ec_id=m1078093#slide=1>.

[46] Mary Belenky, Blythe Clincy, Nancy Goldberger, and Jill Tarule, *Women's Ways of Knowing: The Development of Self, Voice, and Mind* (New York: Springer-Verlag, 1986). Mention of the award is in Mary Roth Walsh, *Women, Men, and Gender: Ongoing Debates* (New Haven, CT: Yale University Press, 1997), 249.

[47] Ibid., 252.

[48] Belenky et al. (1986), 4. Quoted in Walsh, *Women, Men, and Gender*, 250.

[49] L. J. Walker, "Sex Differences in the Development of Moral Reasoning: A Critical Review," *Child Development* 55 (1984): 677–91; and L. J. Walker, "Sex Differences in the Development of Moral Reasoning: A Rejoinder to Baumrind," *Child Development* 57 (1986): 522–26. Discussed and cited by Walsh, *Women, Men, and Gender*, 263.

[50] S. Thoma, "Estimating Gender Differences in the Comprehension and Preference of Moral Issues," *Developmental Review* 6, no. 2 (1986): 165–80, and M. Bebeau and M. M. Brabeck, Moral Reasoning and Ethical Sensitivity among Men and Women in the Professions," in *Who Cares? Theory, Research and Educational Implications of the Ethic of Care*, ed. M. Brabeck (New York: Praeger, 1989), 144–64. Both cited in Walsh, *op. cit.*, 263.

[51] C. Gilligan and J. Atanucci, "Two Moral Orientations: Gender Differences and Similarities," *Merrill-Palmer Quarterly*, 34 (1988), 223–37.

[52] T. Hurd and M. Brabeck, "The Ethic of Care as Revealed in College Texts, l970–l990: An Empirical Examination of Alpha and Beta Bias," *Teaching of Psychology* (1997): 159–67. Cited in Walsh, *Women, Men, and Gender*.

[53] See discussion in Walsh, *Women, Men, and Gender*.

[54] Yuliya Chernykhovskaya, "Why So Few Women Philosophers? Do Gender Differences in Philosophical Intuition Account for Women's Underrepresentation in Philosophy Departments?" Interdisciplinary Honors Thesis, Rutgers University, 2010–2011.

[55] Chernykhovskaya, 5.

[56] Ibid., 23.

[57] See, e.g., Carol Dweck, "Mindsets and Math/Science Achievement," Carnegie Corporation of New York-Institute for Advanced Study Commission on Mathematics and Science Education (2008). See also "Is Math a Gift? Beliefs That Put Females at Risk" available at Dweck's website: https://www.stanford.edu/dept/psychology/cgi-bin/drupalm/cdweck