The Woman Question in Medicine

An Update

BY HILDE LINDEMANN

The women's movement rose to prominence decades ago, but women continue to be discriminated against in their encounters with medicine, as both patients and practitioners. How should bioethics think about this state of affairs?

It has been about forty years since the women's movement added its voices to the U.S. culture wars, demanding an end to the long history of social practices and institutions that favor men's interests, preoccupations, and concerns over women's and place women in positions of subservience to men. Since then, women have invaded many strongholds that had previously been reserved for men only. According to the U.S. Department of Labor, women now make up almost 47 percent of the paid labor force, and 40 percent of them work in managerial positions. On average, they earn 80 percent of what men do, and in the sixteen-to-twenty-four age bracket, they earn 93 percent of what young men earn. So it seems a fitting time to see whether they are doing as well in their encounters with medicine. In this paper, I'll take a look first at the history of physicians' attitudes toward women, and then at three contemporary areas of medicine in particular: health research relevant to women, health policies, and women's success at working their way into the medical profession. Because the picture that emerges is somewhat less than rosy, I'll end with a few ideas for how bioethicists might want to think about the current state of affairs.

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That Was Then

First, a little history. Physicians are taught to note physiological differences between men and women, but, like everyone else, they don't always fully appreciate the degree to which the differences between women and men are not facts of nature but constructions of society. Because our culture is persistently focused on men, it seems normal and natural to many of us that man should be the measure—the unstated point of reference—for what is paradigmatic of human beings. Woman is then defined in terms of her departure from that standard. The history of this idea goes back at least as far as Aristotle, who defines woman as a "deformed man."[1]

In bodily terms, woman's difference from man is most evident in her reproductive organs, so these have become associated with her identity in a way that a man's have not. In the mid-1800s, for example, the German physician Rudolph Virchow wrote, "Woman is a pair of ovaries with a human being attached, whereas man is a human being furnished with a pair of testes."[2] Another physician writing at about the same time explained, "It is as if the Almighty in creating the female sex had taken a uterus and built up a woman around it."[3]

Woman's reproductive difference from man has been taken as a defining characteristic, but it has also marked her as *abnormal*. Where man is the norm, woman is not merely different, but deviant. The Victorian anthropologist James Allen treated woman as a kind of stunted man, noting that "physically, mentally, and morally, woman is a kind of adult child. . . . Man is the head of creation."[4] And in medical circles in the nineteenth and early twentieth century, the thought that female functions were inherently pathological was advanced as a physiological fact. As the president of the American Gynecology Society stated in 1900:

> Many a young life is battered and forever crippled on the breakers of puberty; if it crosses these unharmed and is not dashed to pieces on the rock of childbirth, it may still ground on the ever-recurring shallows of menstruation, and lastly upon the final bar of the menopause ere protection is found in the unruffled waters of the harbor beyond reach of sexual storms.[5]

Nor has the idea of woman's abnormality been confined only to her reproductive system. Women's physical deviance from the male standard has long been thought to imply mental deviance as well. Aristotle, you will remember, said that "the deliberative element in women lacks authority,"[6] and Kant observed that "a woman is embarrassed little that she does not possess high insights; that she is timid, and not fit for serious employment, and so forth; she is beautiful and captivates, and that is enough."[7]

The acceptance by the medical profession of Darwinian evolutionary theory opened a large debate in the Victorian era concerning woman's supposed lack of rationality. One such theory was that because men's brains weighed 10 percent more than women's brains on average, feminine irrationality could be chalked up to the "missing five ounces" of gray matter. This theory, however, ran afoul of "the elephant problem"—namely, that elephants, whose brains weigh more than men's, ought to be considerably smarter than humans of either sex. The difficulty this posed prompted a shift to the idea that the *ratio* of brain to body size is what determines intellect, but unfortunately for scientists, the ratio was discovered to be higher in women than in men.

The theory was abandoned.

The debate over the intellectual capacity of women's brains was not ended, however. In 1873, Dr. Edward Clarke, a professor of medicine at Harvard, published *Sex in Education; or, A Fair Chance for the Girls*, which went through seventeen editions over the next few years. Clarke surveyed the best medical thinking regarding women and after scholarly reflection concluded that the mental exertion required for higher education sapped a woman's body of its vital forces to such an extent that her uterus would atrophy. Putting a woman's brain to masculine use would thus make her an asexual monster. This was something of a double-bind, though, for cleverness and daring were considered to be the traits that allowed a species to evolve, which meant that males were to be the innovators who could best adapt to harsh environments, while women were merely to reproduce whatever hereditary material they were given. So, in theory, at any rate, as men continued to ascend the evolutionary ladder, women would continue to devolve, growing frailer and less intelligent with every generation.

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train as physicians. The trouble, according to one Victorian doctor, was that their menstrual cycles directly interfered with their brain function:

> One shudders to think [he wrote] of the conclusions arrived at by female bacteriologists or histologists, at the period when their entire system, both physical and mental, is, so to speak, "unstrung," to say nothing of the terrible mistakes which a lady surgeon might make under similar conditions.[8]

A number of women did, of course, become physicians in that era. In 1847, after vainly seeking admission to eleven medical schools, Elizabeth Blackwell was allowed to attend Geneva Medical College in upstate New York and, graduating first in her class, in 1849 became the first woman physician in the United States. However, hospitals and dispensaries uniformly refused to extend her practice privileges. She was even refused lodging and office space when she tried to set up a private practice. Nevertheless, she persevered, and in 1857 she opened the New York Infirmary for Women and Children in the slums of New York City.

The first African American woman doctor was Rebecca Lee Crumpler, who received her degree from the New England Female Medical College in 1864. Except for a brief interval when she doctored newly freed slaves in Richmond, Virginia, Crumpler practiced medicine in Boston, also specializing in the care of women, children, and the poor. By the end of the nineteenth century, the ranks of women physicians had swelled to over seven thousand. As Mary Putnam Jacobi, another pioneering physician, wrote in 1891, "It is perfectly evident from the records, that the opposition to women physicians has rarely been based upon any sincere conviction that women could not be instructed in medicine, but upon an intense dislike to the idea that they should be so capable."[9]

How About Now?

The twentieth century brought a number of improvements in the status of women—including, in 1920, the right to vote—and the gradual acceptance of middle-class women in the workplace (poor women, of course, have always worked for pay). But the persistent assumption that man's body is the norm and woman's body is abnormal means that women have been chronically excluded from human subjects research. The infamous Tuskegee experiment, begun in 1932 to observe the natural progress of syphilis in African Americans, enrolled 399 men but no women (which shows you that exclusion isn't always a bad thing). The Baltimore Longitudinal Study, begun on men in 1958 to investigate the physiology of aging, by 1984 still had no data on women. The Physician's Health Study, begun in 1981 to investigate whether aspirin could decrease the risk of heart disease, enrolled 22,000 men but no women. The possible impact of caffeine on heart disease was studied in 45,589 male research subjects beginning in 1986; no female subjects were included. And my favorite pilot study, conducted at Rockefeller University in 1989 to investigate how obesity affects breast and uterine cancer, enrolled only men.[10]

The General Accounting Office reported in 1992 that only half of new drugs were then being analyzed by gender for safety, and under half were analyzed for efficacy. A careful 1994 Institute of Medicine study, spearheaded by Ruth Faden, was unable to demonstrate conclusively that women have systematically been barred from research, but because so many protocols failed to specify the gender ratios of their research populations, it was not possible to know for certain what difference, if any, gender might have made in those trials. Thus, throughout the twentieth century, women's bodies were viewed fundamentally as analogs to the male norm, when of course they are not. Undeniable differences were then viewed as pathological departures, and because the departures were assumed to be mistakes in the real design, they did not need to be studied: science was concerned only with the real design.

Sex disparities have been widely documented for a variety of disorders: "in autoimmune diseases such as rheumatoid arthritis, lupus and multiple sclerosis; in some psychological disorders, including major depressive disorder, schizophrenia, autism, eating disorders and attention deficit hyperactivity disorder; and in chronic fatigue syndrome, asthma and several types of cancer."[11] For that reason, in 1993 Congress passed the NIH Revitalization Act, requiring the National Institutes of Health to insure that phase III clinical trials would be "designed and carried out in a manner sufficient to provide for a valid analysis of whether the variables being studied in the trial affect females or members of minority groups, as the case may be, differently than other subjects in the trial."[12]

A prominent epidemiologist objected to the Revitalization Act on the ground that, "while the path to disease may be different for men and women, the treatment usually works equally well for both."[13] But that is just false. The lack of knowledge about sex disparities means that women have been subjected to potentially life-threatening delays before being correctly diagnosed and forced to accept treatments that do not function properly for them. As the authors of a recent study point out, "This has been demonstrated in the field of cardiology, where the numbers of women dying of heart infarction at a young age significantly dropped after two decades of research and the dissemination of essential information about gender differences in clinical presentation, symptoms, diagnostic and therapeutic approaches."[14]

Despite the NIH's congressional mandate, an analysis of findings from randomized, controlled trials published in nine high-impact medical

journals in 2004 showed that "eighty-seven percent of the studies did not report any outcomes by sex or include sex as a covariate in modeling."[15] A 2010 survey of research incorporating a gender analysis in nine medical subspecialties concludes that, while published studies incorporating sex and gender in the research design have increased markedly since the 1990s, "a striking underrepresentation of research about gender differences in management characterizes all disciplines but cardiology": most subfields hover around 10 percent, compared to cardiology's 22 percent.[16] The authors of the September 2010 IOM report, *Women's Health: Progress, Pitfalls, and Promise*, likewise note that "a lack of analysis and reporting of data separately for males and females continues to limit researchers' ability to identify potentially important sex and gender differences."[17]

One possible reason for this continued lack of understanding may be that women themselves are not well positioned to conduct clinical research: in 2008, only 23 percent of all funded grants went to women investigators.[18] Matters are even worse when it comes to leadership roles in setting research agendas. A key position of power and influence is that of principal investigator of a large center grant. But consider the Clinical and Translational Science Award program emanating from the NIH—one of the largest center grants in research history. CTSA PIs wield tremendous clout in determining what kinds of research will be pursued, yet only three of the initial twenty-four CTSAs went to women. Equally disturbing is the discrepancy in salaries offered by NIH Institutional Mentored Scientist Development Awards. Those that build research capacities in women's health—an area that attracts women—are considerably lower than awards to researchers in oncology, aging, drug abuse, and clinical research.[19] It should come as no surprise, then, that currently only 28.5 percent of NIH Institutes are headed by women.

The comparative lack of good data on women's health is only compounded by the unreliable data that women—especially pregnant women—receive from their doctors and other well-wishers. Most of the master narratives about pregnancy currently circulating widely in the United States depict the good pregnant woman as vigilantly guarding her bodily purity so as to provide an unsullied environment for her growing fetus. They (and the people who act on them) tell her to refrain from ingesting alcoholic beverages. They tell her to discontinue the use of antidepressants, antihistamines, and asthma medications. They tell her to quit drinking coffee. They tell her to

> avoid an array of foods from soft cheese to sushi, to sleep in a specified position (currently, avoiding stomach and back, with left side preferred to right), to avoid paint (including those with low volatile compounds), to avoid changing the cat litter, not to sit in the bathtub longer than ten minutes, not to sample the cookie dough, to avoid loud music, and even to keep a laptop computer several inches from [her] pregnant bell[y], "just in case."[20]

Insofar as master narratives guide behavior, they are essential for human social life; without them, we would not know what we are supposed to do. But because they work on us subliminally, at a visceral rather than a rational level, they tend to be evidence-resistant. For example, there are simply no data to show that moderate consumption of alcohol while pregnant is harmful to the fetus, and the rest of the forbidden substances and activities in the list above likewise carry no evidence of harm—indeed, some of them actually carry evidence of safety. Yet because pregnant women's behavior is policed by others acting on the basis of these narratives and the women themselves frequently internalize them, they are likely to find that *even if they know the countervailing evidence*, they cannot bring themselves to put into their bodies anything they wouldn't feed their babies-to-be.

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Whereas for clinical trials the woman question was one of exclusion, when it comes to pregnancy, the question is one of intense and unrelenting pressure to perform. But notice that the focus is not really on the women—it's on what's best for the growing fetus. Pregnant women do not get praised when they do all the things they are supposed to do to guard their fetuses' well-being—they just get demerits if they fail to do any of them. The reasons for this are complex; certainly one difficulty has been that the interconnectedness of fetus and gestating woman is something our moral theories are particularly ill equipped to capture, with the result that the fetus tends to take center stage and the woman tends to become the incubator or maternal

background. This makes it easier to value the woman primarily for the work she does in bringing the fetus to term, harder to value her for her own sake.

There's a long history, of course, of physicians giving pregnant women advice about what to eat, what to think, how much exercise to take, and what kind of environment to surround themselves with, not to mention how to care for the baby once the pregnancy is over.[21] What's worth noticing about this history, though, is how the advice goes in and out of fashion, depending less on medical evidence than on social attitudes toward women at any particular point in time. Possibly today's physicians are immune to these attitudes where their women patients are concerned, but there isn't really any reason to think so.

Discriminatory health policies. At the moment, health care insurance is rife with policies and practices that are unfair to women. Only six percent of women aged eighteen to sixty-four are able to purchase insurance outside the workplace, usually because they are discriminated against both when they apply for coverage and when their premiums are calculated.[22] In most states, it's legal for companies selling individual health policies to engage in "gender rating"—that is, to charge women more than men for the same coverage, even for policies that exclude pregnancy and childbirth care.[23] And these policies do often exclude maternity coverage, or charge much more for it; only fourteen states require policies in the individual market to cover maternity care.[24] Insurers also apply gender rating to group coverage, but laws against sex discrimination in the workplace prevent employers from passing along higher costs to their employees based on sex. As a result, smaller or midsize businesses that employ mostly women either cannot afford to insure their workers at all, or they have to offer plans with very high deductibles.[25]

Some insurance companies also use the "preexisting condition" clause in their policies to deny coverage to women who have had a prior caesarean section. And as if that isn't bad enough, eight states and the District of Columbia permit them to deny coverage to women who have been victims of domestic violence.[26] From a business point of view, this makes good sense: both surgical birth and beatings are predictors of higher costs to the company. From a human perspective, though, it amounts to kicking women when they're already down.

The recently passed health insurance reform bill, slated for implementation in 2014, would do away with many of these abuses. Gender rating would no longer be allowed, individual policies would have to offer maternity care, and neither prior C-sections nor having been the target of domestic assault would count as reasons to deny women coverage. However, the reform bill does not address the fundamental problem, which is that health insurance is tied to paid work. As women over thirty disproportionately work in low-paying jobs with no benefits and tend disproportionately either to cut back on their paying jobs or drop out of the workforce to care for their children and ill or elderly family members, tying insurance to paid work makes what is already an unfair division of gendered labor even more unfair.

Women in medicine. In 2004, the Association of American Medical Colleges reported that for the first time in history, women made up the majority of medical school applicants. By 2005, 49 percent of medical school students and 42 percent of residents were women. Today, a robust 70 percent of ob-gyns are women, as are roughly half of pediatricians and psychiatrists. This shows substantial progress, but it by no means indicates that women have finally reached parity in medicine. In general surgery, only one-fourth of residents are women. In urology, it's about 12 percent; in neurosurgery, 10 percent; in orthopedic surgery, 9 percent.[27] And women physicians continue to earn less than their male colleagues—an estimated 25 to 35 percent less, depending on the specialty.[28]

Part of the reason for the discrepancy in pay is that most women physicians are primary care doctors, but women doctors also work fewer hours than men. About a third of women pediatricians work part time, for example, compared to only 4 percent of men.[29] A preference for work flexibility and fewer hours is widely attributed to a "lifestyle choice,"[30] but we might want to think about the extent to which such choices are socially shaped. That the brunt of the responsibility for child care and care of the chronically ill continues to fall heavily on women, and that cutting back on paid work and seeking job flexibility might be a rational way to discharge that responsibility, calls into question how free a lifestyle choice such part-time work really is.

It's worth pointing out, though, that even full-time women doctors see fewer patients than their male counterparts—an average of 87 patients per week compared to men's 102—and this might also affect how much they are paid. A 2002 analysis in the *Journal of the American Medical Association* accounts for the lower patient ratio by explaining that women doctors typically spend more time talking with and counseling patients than men doctors do,[31] which raises interesting questions about whether that makes a difference in their respective patients' health outcomes. There may be reason to think so: a study published in *BMJ* in 2007 found that the United States' average patient-physician time (thirty minutes a year for adults) was about half New Zealand's and a third of Australia's, and linked this to our relatively poor health outcomes when compared to other developed countries.[32] A study of the impact of the physician's gender on patient care might well show similar results.

Women's advancement to leadership positions in academic medicine has been unduly slow. Only 17 percent of tenured professors, 16 percent

of full professors, 10 percent of department chairs, and 11 percent of deans in U.S. medical schools are women.[33] Women faculty do more of the tasks that have been called "institutional housekeeping," consistently earn less than men with comparable productivity, and, if they have children, have less secretarial support and fewer institutional research dollars than male faculty or faculty women without children.[34] According to a study published in the *Annals of Internal Medicine* in 2000, rates of reported gender-based discrimination in medical schools ranged from 47 percent for the youngest faculty to 70 percent for the oldest. Of the women faculty who had been sexually harassed, 80 percent perceived gender bias in their institution, which might have been expected, but equally disturbing is that 61 percent of women who had *not* been harassed also thought the academic environment was sexist.[35]

Nor is the gender disadvantage in leadership confined to medical schools. Not only are a mere six out of twenty-one NIH Institutes headed by women, but the editorial boards of the *Journal of the American Medical Association*, the *New England Journal of Medicine*, and the *Annals of Internal Medicine* consist of 6 percent, 19 percent, and 19 percent women, respectively. The AMA Board of Trustees consists of four women and seventeen men. The AAMC has never, in all its 130-year history, had a woman president.

Five Closing Points

How are we to make sense of this jumble of facts about the history of doctors' opinions of women, clinical research on women, health care insurance for women, and women in medicine? The picture that emerges is disturbing—just the sort of thing, one might think, that calls out for bioethical analysis. Bioethicists are meant, after all, to engage in critique, perhaps especially where health care practices and institutions forcibly exclude or problematically include half the adult population. For the most part, however, we have been remarkably slow to criticize medicine's shortcomings regarding women. It's only feminist bioethicists—a tiny subset of the field—who, for the last twenty years or so, have been raising the woman question, but they have not gotten much of a hearing from their nonfeminist colleagues. That, I think, is a serious problem for bioethics.

So what might a feminist bioethicist do with these data? Well, this one would like to draw them together by means of five closing points.

1. The androcentrism that has been so glaring in the history of medicine has not entirely gone away. Androcentrism is the view that man is the paradigmatic human being, the most basic and obvious example of the species, and it is still quite visible in the areas I have examined. You can see it particularly well in how researchers still don't seem to feel the need to report outcomes of clinical trials by sex, and in how drug doses are keyed to masculine bodies.

2. By the logic of androcentrism, if man is the measure of human being, then woman must be inferior. If women were just different, then men would be as different from women as women are from men, but they aren't—they're more important. So then women are less important. You can see this in the low levels of funding for women's health, and in the pay gap between men and women physicians.

3. Women are not valued socially for themselves alone, but for something else: their fetuses, for example, or the care they give to their families and friends. The list of things that pregnant women are expected to do or to refrain from doing, at a considerable cost to themselves, is only one of many signs of this kind of in-

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difference. It's evident, too, in what would otherwise be an amazing coincidence—namely, that one-third of women doctors, but only 4 percent of their male colleagues, just happen to choose to practice part time, presumably the better to serve their families.

4. Let me be clear. Doctors do not believe that men are paradigmatic human beings, and they also do not think women are inferior. But the data plainly indicate that androcentrism and poor treatment of women persist. The reason is not that men sit around figuring out how to perpetuate the oppression of women. Rather, it's that gender is a *system*. It's the result of social practices and institutions that work together quite impersonally to favor the interests of men over women. Here, health insurance coverage is a good example. Insurers clearly don't mean anything personal by excluding contraception from their health care plans—it's just that the plans are biased in favor of

men, and the insurance companies profit from this.

5. If you want to find out about women, you have to ask them—it's no use counting on men to do the necessary research because, by and large, they seem to be indifferent to the woman question. That's apparent in the lack of data on women in clinical trials and the lack of women in leadership roles in clinical research just compounds the problem. This point was brought home to me clearly in my research for this paper: if you scan the list of citations you will see that with a single glaring exception, every study I could find on the status of women in medicine was conducted by women.

Finally, just as sexism is not confined to medicine alone, but is found in every part of our society, so, too, abusive power relations are not confined to women alone—there are many other forms of oppression. The generalizations derived from the snapshot of women I've offered here might apply equally well to other social groups who are on the lower rungs of hierarchies of power. If so, then a feminist bioethics has theoretical resources to offer a bioethics for those other groups.

Take disability bioethics. (1) The equivalent, for disabled people, to androcentrism is the strong social bias toward people with normal bodies and abilities. (2) The logic of ableism, like that of androcentrism, is that disabled people are inferior. But, (3) whereas women are socially valued for services they can provide, disabled people do not seem to be socially valued for much of anything, so here is an important difference between gender and disability. Nonetheless, (4) as with sexism, the bias is not personal—it is systemic, shored up by many practices and institutional arrangements that favor the able-bodied. And finally, (5) if you want to find out about disabled people, you have to ask them, not wait for able-bodied people to do the research.

It's not that all oppressions are the same—they aren't. Or that abusive power systems aside from gender don't each already have their own theorists—they do. And, of course, oppressions overlap because people frequently belong to several oppressed groups at the same time. But if feminist bioethicists have theoretical resources to contribute to disability bioethics, elder bioethics, queer bioethics, a bioethics of race, or a bioethics of poverty, then it's also true that they have much to learn from the theorists of these other oppressions. To date, they have almost never done so.

In bioethics, the best and most interesting work is often interdisciplinary. What makes feminist bioethics feminist is its primary focus on gender. But because women come in various races, classes, degrees of poverty, degrees of disability, and degrees of queerness, we feminist bioethicists could address the woman question in medicine and bioethics considerably more fully if we joined forces with the colleagues who theorize these other imbalances of power. Everyone—doctors, other health care professionals, bioethicists, patients, and society as a whole—might benefit from the result.

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References

1. Aristotle, *Generation of Animals*, 1.20, 728a18.

2. D. Sagon, "Gender Specifics: Why Women Aren't Men," *New York Times*, Special Edition: Women's Health, June 21, 1998.

3. M. Poovey, *Uneven Developments: The Ideological Work of Gender in Mid-Victorian England* (Chicago, Ill.: University of Chicago Press, 1988), 35.

4. M.O. Little, "Why a Feminist Approach to Bioethics?" *Kennedy Institute of Ethics Journal* 6, no. 1 (1996): 1-18, at 10.

5. C. Smith-Rosenberg, *Disorderly Conduct: Visions of Gender in Victorian America* (New York: Oxford University Press, 1985), 184.

6. Aristotle, *Politics*, 1260a11-13.

7. I. Kant, *Observations on the Feeling of the Beautiful and the Sublime*, tr. J.T. Goldthwait (Berkeley: University of California Press, 1960), 93-94.

8. B. Ehrenreich, "The Sexual Politics of Sickness," in *The Sociology of Health and Illness: Critical Perspectives*, ed. P. Conrad and R. Kern, 3rd ed. (New York: St. Martin's Press, 1990), 274.

9. E.L. Chin, "Looking Back Over the History of Women in Medicine," http://www.mommd.com/lookingback.shtml; accessed April 18, 2011.

10. R. Dresser, "Wanted: Single, White Male for Medical Research," *Hastings Center Report* 22 (1992): 24-29.

11. A.M. Kim, C.M. Tingen, and T. Woodruff, "Sex Bias in Trials and Treatment Must End," *Nature* 465 (June 10, 2010): 688-89, at 688.

12. Senate Committee on Labor and Human Resources, *National Institutes of Health Revitalization Act of 1993*, Public Law 103-43, 103rd Cong., June 10, 1993.

13. T. Parsons, "Study Finds Men—Not Women—Underrepresented in Clinical Trials," *The Gazette Online: The Newspaper of the Johns Hopkins University*, May 7, 2001, at http://www.jhu.edu/~gazette/2001/may0701/07mennot.html, quoting Curtis L. Meinert.

14. S. Oertelt-Prigione et al., "Analysis of Sex- and Gender-Specific Research Reveals a Common Increase in Publications and Marked Differences between Disciplines," *BMC Medicine* 8 (2010): 1-10, at 8; published online November 10, 2010, DOI: 10.1186/1741-7015-8-70.

15. M. Carnes, C. Morrissey, and S.E. Geller, "Women's Health and Women's Leadership in Academic Medicine: Hitting the Same Glass Ceiling?" *Journal of Women's Health* 17, no. 9 (2008): 1453-62, at 1457.

16. Oertelt-Prigione et al., "Analysis of Sex- and Gender-Specific Research Reveals a Common Increase in Publications and Marked Differences between Disciplines."

17. Institute of Medicine, Committee on Women's Health Research, Board on Population Health and Public Health Practice, *Women's Health: Progress, Pitfalls, and Promise* (Washington, D.C.: National Academies Press, 2010).

18. Carnes, Morrissey, and Geller, "Women's Health and Women's Leadership in Academic Medicine," 1455.

19. Ibid., 1456.

20. A.D. Lyerly et al., "Risk and the Pregnant Body," *Hastings Center Report* 39, no. 6 (2009): 34-42, at 38.

21. For a fascinating history of the social policing of pregnant women, see R. Kukla, *Mass Hysteria: Medicine, Culture, and*

Women's Bodies (Lanham, Md.: Rowman and Littlefield, 2005).

22. Democratic Policy Committee, "Senate Health Insurance Reform Ends Coverage Discrimination," September 30, 2009, http://dpc.senate.gov/dpc-dev-doc.cfm?doc_name=fs-111-1-126.

23. D. Grady, "Overhaul Will Lower the Costs of Being a Woman," *New York Times*, March 29, 2010.

24. Democratic Policy Committee, "Senate Health Insurance Reform Ends Coverage Discrimination."

25. Grady, "Overhaul Will Lower the Costs of Being a Woman."

26. Democratic Policy Committee, "Senate Health Insurance Reform Ends Coverage Discrimination."

27. B. Darves, "Women in Medicine Force Change in Workforce Dynamics," *New England Journal of Medicine Career Center*, April 2005.

28. Ibid.

29. M.H. Nowlan, "Women Doctors, Their Ranks Growing, Transform Medicine," *Boston Globe*, October 2, 2006.

30. Darves, "Women in Medicine Force Change in Workforce Dynamics."

31. Nowlan, "Women Doctors, Their Ranks Growing, Transform Medicine."

32. A.B. Bindman et al., "Diagnostic Scope of and Exposure to Primary Care Physicians in Australia, New Zealand, and the United States: Cross Sectional Analysis of Results from Three National Surveys," *British Medical Journal* 334 (2007): 1261.

33. Carnes, Morrissey, and Geller, "Women's Health and Women's Leadership in Academic Medicine," 1455.

34. Ibid., 1455.

35. P. Carr et al., "Faculty Perceptions of Gender Discrimination and Sexual Harassment in Academic Medicine," *Annals of Internal Medicine* 132 (2000): 889-96.