



RESPONSE TO LAWRENCE SUMMERS' REMARKS ON WOMEN IN SCIENCE

(Updated to reflect release of transcript of Summers' remarks)

At a recent private, invitation-only conference on women and minorities in science, Harvard University president, Lawrence Summers, gave a controversial luncheon talk offering three possible explanations for the small numbers of women in high-level positions in science and engineering. Because Summers' "explanations" are being widely reported in the press and because the conference organizer and Harvard economist, Richard B. Freeman, has characterized Summers' critics as "very sensitive" and as over-reacting, WISELI feels compelled to address and counter the arguments Summers' made.

The reasons for women's inadequate representation at the highest levels of academic science are indeed complex and we whole-heartedly agree with Summers' contention that "raising questions, discussing multiple factors that may explain a difficult problem, and seeking to understand how they interrelate is vitally important"(Summers, 1/18). Indeed WISELI - the Women in Science and Engineering Leadership Institute, funded by the National Science Foundation's (NSF) ADVANCE Institutional Transformation grant program, is committed to conducting research that seeks to identify such complex and interacting factors and to implement remedies based on research findings. WISELI is joined in this effort by eighteen other universities funded by NSF's ADVANCE Program. In addition, the efforts of all these institutions are based on and supplemented by the work of several reputable scholars who have devoted years of research to the question of women's achievements in science and engineering and who have published numerous books and scholarly articles on the subject. Several of these scholars were in attendance at the conference in question. The problem is not that the question of women's representation and achievement in science be analyzed and discussed; indeed that was the point of the conference. The problem is that Lawrence Summers appears to be ignorant of the vast body of scholarship that already exists on the subject.

Summers began by positing that one reason for women's inadequate representation in high-level positions in science is the reluctance or inability of women who have children to work 80-hour weeks. As Virginia Valian, author of *Why So Slow: The Advancement of Women*, notes in an as yet unpublished opinion piece submitted to *The New York Times*, Summers' explanation assumes that "80-hour work weeks are a necessary condition for intellectual creativity and excellence" and that "women who *do* put in 80-hour weeks receive the same rewards as men." Both assumptions, Valian argues, are faulty. According to Valian, there is no data showing that an 80-hour workweek is essential for academic excellence; "it is a folk belief still awaiting verification" (Valian). There is also a vast array of data indicating that women who do put in 80-

hour weeks do not reap the same rewards as men. Numerous controlled studies show that women's successes are frequently attributed to luck rather than skill and that women are more poorly evaluated than men with precisely the same experience and credentials (Deaux and Emswiller, Martell, Eagly and Karau, Heilman, Ridgeway, Valian). In one such study, 238 academic psychologists, 118 male and 120 female, evaluated a résumé submitted in application for an assistant professorship that was randomly assigned a male or female name. Both male and female participants gave the male applicant better evaluations for teaching and research and were more likely to hire the male applicant (Steinpreis, et al.).

Summers continued by arguing that fewer girls than boys have top scores on science and math tests in late high school years. He acknowledged no one really understands the reasons for this, but went on to contend that genetics may provide the explanation. Women, he argued, do not have the same "intrinsic aptitude" as men in some fields. This lack of "intrinsic aptitude" presumably explains women's inadequate representation in senior positions on science faculty across the nation (Summers, 1/14). Summers glosses over a vast body of research on gender differences in science and math tests, including recent studies indicating that gender differences in performance on mathematical tests are small and decreasing and that a variety of complex and as yet not fully understood factors, including expectations and stereotype threat, influence performance (Leahey and Guo, Hyde, et al., Spencer, Steele, and Quinn). To rely upon genetics as the explanatory factor is irresponsible and unscientific. Though genetic research has indeed made incredible advances and has shown, as Summers argued, that there is a genetic component to autism, it is highly unscientific to extrapolate from such research to conclude that genetics is also responsible for women's disproportionate representation in the higher echelons of math and science. Our past experience with eugenics, the effort to apply simple genetic concepts to solve and explain complex socially constructed conditions, should warn us against such simplistic extrapolation. Summers' comments on women's innate inabilities are insulting not only to women in general and women scientists in particular, but also to geneticists who struggle to meticulously research the highly complex interactions between genes and the environment.

Finally, Summers makes an argument based in his own field of expertise, economics. If discrimination was the main factor limiting the advancement of women in science and engineering, Summers argues, economic theory suggests that a school that does not discriminate would gain an advantage by hiring away the top women who were discriminated against elsewhere (Bombardieri, Boston Globe). Unfortunately, this theory posits a model of rational decision-making that frequently does not hold in practice, and does not take into consideration real world constraints that prevent talented and exceptional women scientists from seeking positions at other universities. For example, several studies indicate that women scientists, especially married women scientists with children, are more geographically constrained than their male counterparts (Kulis and Sicotti, Schauman and Xie). Summers' reliance on this neoclassical economic theory also fails to recognize the fact that discriminatory treatment may be widespread across academe; that there may not be a school that does not discriminate. Summers might also consider, as Virginia Valian points out, that particularly well-endowed private universities such as Harvard have considerable resources with which to indulge their "taste for discrimination" (to use the language of economists).

If Summers were more well-versed in the vast body of psychological and sociological research on the nature of discrimination, including the research of the members of his audience, perhaps he would have realized that our shared and deeply ingrained cultural expectations about gender, already internalized by his daughters who at a very young age named their toy trucks “daddy truck” and “baby truck,” contribute to unintentional discriminatory treatment of women, particularly when they seek to enter fields traditionally dominated by men.

Are Summers’ critics, including ourselves, “over reacting” and “very sensitive”? We think not. In response to his critics, Summers claimed that he was trying to be provocative. There is a difference, we argue, between provoking stimulating intellectual debate and discussion and ignoring research findings and questioning women’s competence to excel in science.

Summers’ failure to engage with the scholarly work in this field should be an embarrassment to Harvard University, for it tramples upon the proud tradition of intellectual excellence that Harvard University claims to uphold. Summers needs a thorough education in the issues confronting women in academe. For the sake of Harvard University, its women students who aspire to positions in science, and its female faculty members, we hope he gets it.

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