

# California State University, Northridge



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## Women Underrepresented, By Lawrence Summers

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Women in Mathematics, Science & Engineering

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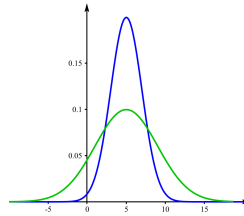
Prior to this article, Lawrence Summers arguably had astounding educational background, as well as attending Massachusetts Institute of Technology (MIT) at an early age of 16. Shortly after MIT, he attended Harvard University as a graduate earning his (Ph.D., 1982), but also become one of youngest professor at age of 28.[Sum81] As for his professional career, working closely with Clinton's administration as Treasury Secretary [Dep01] and Obama administration as director of the National Economic Council,[Liv10] well accomplished would be an understatement.

Fastward to the cause of article written by PBS NewsHour, "Harvard President Summers' Remarks About Women in Science, Engineering", [New05] appears that the Harvard President at that time, Lawrence Summers gotten himself into a controversial predicament even after 15 years talked about today. A problem that caught the interest of Summers, lead to him addressing why women are underrepresented particularly in the science and engineering. In doing so, he wanted to, "... attempt to adopt an entirely positive, rather than normative approach, ...,[New05]" provoke his audience. In attempt to analyze and breakdown three hypotheses listed in order of importance rank, according to Summers [New05]: " (1) *high-powered job hypothesis*, (2) *availability of aptitude hypothesis*, and (3) *socialization and patterns of discrimination hypothesis*".

His most important hypothesis, also known as the "(1) high-powered job hypothesis", claims that: "...there are many professions and many activities, and the most prestigious activities in our society expect of people who are going to rise to leadership positions in their 40s near total commitments to their work." [New05]. Then later, he questions our society for desires of prominent jobs. The pattern he observes is apparently men who desire "high-powered intense work" [New05]. To summarize what I think he meant is, women do not desire for high-powered work since they prefer to get married and prioritize raising a family. A young woman who had worked closely with him at the Treasury, reported from her graduate class at Harvard, only 3 out of 22 women are working full time currently. From this small sample size, he is certain that "(1) high-powered job hypothesis" favor towards men.

Without a doubt, "(2) availability of aptitude hypothesis" is the reason for most negative criticism and controversial debate on matter of lack thereof women in stem fields. While watching Professor Susan Williams, she paraphrased Summers statements on aptitude, "...innately thus genetically different from men and lacked natural ability of men in these fields..." [Wil09]. Her expression in disbelief that someone in his caliber could say such ridicule comment, went into history of why women are underrepresented. She then compares Summers with Aristotle, after all these years women still burden this stigma that men are more superior. Nonetheless, Summers and many men alike, often reference such claim by "greater male variability hypothesis". As stated by Summers, "If you do that calculation — and I have no reason to think

that it couldn't be refined in a hundred ways — you get five to one, at the high end.”[New05] To visually understand this concept, provided below are two distribution curves with exact same means. However, it differs in variabilities, the green (males) curve showing that males have both the lowest and highest test results.



Lastly, socialization and patterns of discrimination, Summers described as girls are socialized towards nursing while boys are towards building bridges. However, according to him, “there are issues of intrinsic aptitude, and particularly of the variability of aptitude, and that those considerations are reinforced by what are in fact lesser factors involving socialization and continuing discrimination.” He believes “(3) socialization and patterns of discrimination hypothesis” is not part of the contribution, if any, towards undermining of women in stem fields.

As a computer science major, I believe most, if not all of my classes were majority males, roughly 90%. Of all the females I have encountered, in my opinion, I've always thought that they out-performed most of the males in class with not only hard-working habits, but their ability to do in math and problem solving skills. Now the question arises, will they work in the field as any of the male peers would? I, personally can't for tell the future, but one thing for sure is, if they don't pursue a "high-powered job", my guess would be that it was a preferred choice.

Summers most popular hypothesis, "(2) *availability of aptitude hypothesis*", caused a lot negative backlash at the time and even 15 years later til this day. We live in a country where freedom of speech is valued highly for these type of occurrences, however the majority of people expected more of "political correctness" from Summers being the president of Harvard University. Were his claims to be false? I believe it's a gray area to answer, however I would like to point out modern science has shown the opposite of what Summers described to be "(2) *availability of aptitude hypothesis*", in recent research. "Greater female participation in the workforce tended to increase female variability and, therefore, decrease the variability gap"[Gra+19]. This proves that a cognitive ability of a person varies greater and a standardize test doesn't prove or disprove of one's ability.

"(3) *socialization and patterns of discrimination hypothesis*" not sure what to write for this paragraph. I for sure need to fill up this page. And the final paragraph too, need some more things to write.

Final thoughts, as we wrap this up, although he did apologize for his derogatory comments on “(2) *availability of aptitude hypothesis*”, as well educated as he is, should of known better to at least be politically correct when he speaks to a public audience. I would hope that he meant well when he said, “entirely positive, rather than normative approach”, but either way, members of the Harvard community did justice by voting him off of his role as president.

## References

- [Dep01] U.S. Treasury Department. *U.S. Treasury Department*. 2001. URL: <https://www.treasury.gov/about/history/pages/lhsummers.aspx>.
- [Gra+19] H. Gray et al. “Sex differences in variability across nations in reading, mathematics and science: a meta-analytic extension of Baye and Monseur”. In: *mathematics and science: a meta-analytic extension of Baye and Monseur (2016)* 7.2 (2019). DOI: <https://doi.org/10.1186/s40536-019-0070-9>.
- [Liv10] World Bank Live. *World Bank Live*. 2010. URL: <https://live.worldbank.org/experts/lawrence-h-summers>.
- [New05] PBS NewsHour. *Harvard President Summers’ Remarks About Women in Science, Engineering*. 2005. URL: [https://www.pbs.org/newshour/science/science-jan-june05-summersremarks\\_2-22](https://www.pbs.org/newshour/science/science-jan-june05-summersremarks_2-22).
- [Sum81] Lawrence H Summers. *An asset price approach to the analysis of capital income taxation*. 1981. URL: <https://search.proquest.com/docview/303216376/>.
- [Wil09] YouTube: GRCC History Professor Susan Williams. *Agamede’s Legacies: History of Women in Science*. 2009. URL: <https://www.youtube.com/watch?v=UzUkUFUVhTs>.