

“Women’s Brains” by Stephen Jay Gould (p. 349)

- Published in 1980 in *Natural History*
- Gould was a paleontologist and evolutionary biologist who taught geology and zoology at Harvard University.
- Gould is writing for a general audience. How do we know? He uses straightforward vocabulary, defines technical terms (like craniometry) and explains scientific methods in a clear and detailed step-by-step manner.
- Writer’s purpose is more social criticism than scientific study. Actually he has two arguments – he is against the scientific research itself, and also about the conclusions drawn from that research.
- Seeks to examine the way we think about gender – where some of our ideas come from.
- First person approach takes us into this scientist’s thinking as he critiques the evidence and conclusions of his colleagues from a century ago.

Summary of Argument

1. Opening quote from *Middlemarch* by George Eliot appeals to pathos with its lyrical and philosophical tone “lament[ing] the unfulfilled lives of talented women” (349).
2. Connects Eliot with study of anthropometry (measurement of human body), popular at the time she wrote, that sought to prove the inferiority of women.
3. Points out that though it’s not “fashionable” today, anthropometry was used during much of the 1800s to make hateful comparisons among races, classes and sexes until intelligence testing became the norm (349).
4. Paul Broca was the leader in craniometry (or measurement of the skull).
5. Gould claims Broca’s work “seemed particularly invulnerable to refutation” because his measurements were done carefully and accurately (349).
6. Here is where Gould steps into the essay to say he has “the greatest respect” for Broca’s procedure but then points out that “...science is an inferential exercise, not a catalog of facts” (349). This is a key point in Gould’s concession-refutation argument.
7. L. Manouvrier, described as “a black sheep in Broca’s fold” rejected the idea that women were inferior. Here the term “black sheep” tips the reader off that Manouvrier does not agree wholeheartedly with Broca. The cited text emphasizes this (350).
8. Next, Gould gets into the details of Broca’s argument in order to refute it. Broca’s data came from autopsies in four French hospitals. Although Broca was aware that human males are generally bigger than females and this is part of the reason their brains are larger, he never measured the effect of size alone. Instead he just started with the premise that women are not as intelligent as men.
9. Connecting Eliot to Broca again, Gould tells us that Broca also measured prehistoric skulls in 1873, the same year that Eliot published *Middlemarch*. Broca found that the difference in size between male and female prehistoric skulls was actually less than in modern times (350).
10. Topinard, a follower of Broca, is then quoted as explaining this difference to be the result of prehistoric men having to work hard to “protect and nourish” the woman. By quoting the words of others, Gould appeals to pathos in his readership (351).

11. If that quote didn't get his audience's ire up, Gould begins the next paragraph by identifying Gustave Le Bon as "chief misogynist of Broca's school" and quoting from his "vicious attack" upon women (351). Here is where Gould's use of quoted material is really effective. He lets the invective speak for itself.
12. Gould steps into the essay again with the question "Sound familiar?" and his footnote, pointing out that Broca was not some lone nut and we still feel the impact of these theories today. Gould explains that he was "a leading scientist, one of the founders of social psychology"(351). The message here is clear – Broca had a far greater influence than even Gould originally thought, and his ideas had a far greater impact on our ideas about gender than we would like to think.
13. Gould tells us that he has "reexamined Broca's data" only to find that his numbers are accurate but his interpretation of them wholly without merit. Why? The prehistoric skull data came from only thirteen samples. He says it plainly: "Never have so little data yielded such far-ranging conclusions" (351).
14. Gould then calls into question the data from the other study, involving the French hospitals. The next four paragraphs are a direct logical appeal refuting this data, ending with his nearly exasperated question "In short, who knows what to do with Broca's data? They certainly don't permit any confident claim that men have bigger brains than women" (352).
15. The essay shifts in the next paragraph, as Gould asserts that the ideas promulgated by Broca and his followers were used to support a lot of hateful theories about people. This is the purpose of Gould's essay – to point out that scientific data has been used incorrectly to support social analyses. Women were "singularly denigrated" in this regard, but the ideas were applied to blacks and poor people as well (353).
16. Gould explains that Maria Montessori (most known for the schools that bear her name) was also a lecturer at the University of Rome in anthropology who supported much of Broca's work but didn't buy into his ideas about women. Instead, she thought that men had become superior to women because they were stronger. Considering that technology made physical force less important in modern times, she claimed that "the reign of women is approaching" (353).
17. Gould suggests Montessori's idea as a possible "antidote" – basically that prejudiced men have misinterpreted the data and "disadvantaged groups are truly superior" (353).
18. Finally, Gould says that he prefers "another strategy", namely that the "whole enterprise of setting a biological value upon groups [is] irrelevant and highly injurious" (353).
19. He returns to George Eliot here, to point out that she, an extraordinarily talented female writer, would have appreciated the "special tragedy" such labeling caused. Gould writes that Eliot expressed it for other women, but he would like to extend this special tragedy to all "whose dreams are flouted but also to those who never realized that they may dream" (353).
20. Gould admits that he "cannot match [Eliot's] prose" and ends the essay with the rest of the prelude to *Middlemarch*, that there are those among us like the ugly duckling and Saint Theresa, who are "dispersed among hindrances instead of centering in some long-recognizable deed" (354).