



Reflections of Another “Hard” Sciences Student Who Became an “Upstart” Social Scientist

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Abstract

As a child and later as an undergraduate student, the author was indoctrinated into the idea that the social sciences were more or less useless and not “real” science. After switching from a physics degree to two social science degrees, one a Ph.D., the author learned otherwise. Thus, his journey is similar to that of a previous author in *Insights of Anthropology* [1]. However, valuable lessons were still learned in the author’s former training that had great applicability to his current career, from which he is about to retire.

Keywords

Sociology, Scholar, Ph.D., Degree, Social science

Brief Introduction

Caya [1] discussed in this journal how he had changed from being an engineering student, very critical of the social sciences, to earning a Ph.D. in sociology. Thus, he offered an apology to one of his early sociology professors for his arrogant attitudes towards the social sciences in his earlier days. Based on that story, I felt myself a fellow traveler and wonder how many of us are there?

Even as a Child, Sociology had a Bad Name

Reading his commentary, I cannot but recall that when I was about eight-years-old, I was discussing future careers with my father. I was expected to follow in my brother’s footsteps, since he had earned a Ph.D. in chemical engineering. When I suggested I might want to earn a Ph.D. in the social sciences, my father’s response was that “Any fool can earn a Ph.D. in psychology!” which seriously dampened my enthusiasm for sociology or any other social science.

College Experiences with Social Sciences

Thus, I entered college with the aim of becoming an astronomer after earning some degrees in physics. However, by advanced calculus I was barely hanging on. Our physics cohort had started with about one hundred students, which was cut to about forty by the second year, and ten by the third year. The physics department would have liked to cut it further to the five students who were all Phi Beta Kappas. However, the university didn’t think that being a Phi Beta Kappa should be a requirement for graduation, so the other five of us were allowed to pass our classes and graduate with degrees in physics. Empathy there was not. One professor walked into a math class and

said right off that he didn’t teach classes with more than ten students and the other 32 of us should either leave now or risk being failed, no matter how well we did in the class. Although I was among the best of the students, with an average grade nearly 60% better than the class average, I was still in the “F” range. We ended up making a deal that I would accept a “C” grade if I agreed to never darken the door of his office ever again.

Misogyny there was. Many of my professors felt that letting a woman major in science was a waste of effort because they would just end up getting married and raising children and never using their training. To insure that their prophecy was fulfilled, they would assign women to the least proficient men in labs and grade on the basis of the lowest grade of the two or three team members, effecting eliminating almost all of the women from the physics major. Graduating was even more important than in other times because failure would mean being sent to Vietnam where already tens of thousands had been killed. I chose a senior project that had to be finished on time and to standard prior to being allowed to graduate. I chose a project suggested by my brother that none of my professors be-

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lieved would work, telling me that “if it doesn’t work - you die in Nam!” To their amazement, it did work and once it worked, it only took them a few minutes to come up with an explanation, even though they had argued for weeks prior about it, unable to think of any possible reason for why it might work. That told me that belief could be a hindrance to the brightest of intellects!

After serving two years in the Army (but not in Vietnam) in the Signal Corps (because of my physics degree), I had to consider what to do. In college, I had taken some courses in sociology and anthropology and had done very well, leading me to think I might seek a career in sociology rather than astronomy or physics. Upon the suggestion of some co-eds from my church, I applied to and was admitted to a graduate program in family and child development, taught by several eminent sociologists. My father continued to object because he felt that topics such as sexuality and child rearing should be left to medical doctors to advise their patients.

Career Changes

However, here my “hard” sciences background proved very helpful because I could deal with statistics and research methods issues more easily than many of my peers. I came to realize that humans, human groups, and human families are more difficult to measure (well) and to study (even to define, for that matter!) than the mechanics of billiard balls or many other problems of the “hard” sciences. While sociology has the benefits of greater empathy for humans and the human condition, it also runs a risk of values-blindness where some do not even attempt to look at things from more than one perspective or to consider the risks or limitations of their own favorite sociological theories or perspectives on the world [2]. I still subscribe to astronomy magazines and love to read them, but my life’s work has changed to revolve around issues of so-

ciology. Again, I wonder how many times do students of medicine, the law or the natural sciences become sociologists or have pursued degrees in the other social sciences? Does having been trained in multiple areas offer the same sorts of advantages as being bilingual or multi-lingual? It certainly helped me see things that others have tended to overlook, even though that has not made me always the most popular social scientist, which has, in a small part, led to my retirement in May 2019.

Lessons Learned from the “Hard” Sciences

For example, I learned that the whole point of doing research is that you don’t know for sure what you are going to discover. If you knew in advance with 100% certainty what you would discover, why bother? There is a real risk of confirmation bias if you begin research with a conviction of how it will turn out. There are subtle ways to bias your research to promote desired outcomes. Suppose you expect to “prove” the null hypothesis. I’ve seen scholars who simply refuse to report findings that were significant. I’ve seen them use the Bonferroni procedure to divide alpha by whatever number needed to create no significant results. If you expect to reject the null hypothesis, you can “forget” to report non-significant findings or select whatever small subset of your data that did yield significant results. You can also rely upon very large samples even if the effect sizes are very small. Both approaches fail the standard procedures of all science, which are designed to get you to the facts (within various levels of error) rather than to what you may wish to find.

References

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