Gender Diversity in Computing

I was tremendously pleased to see that the March issue of Computer was devoted to the topic of gender diversity in computing. However, I think an important facet of that topic is both insufficiently understood and poorly addressed.

There’s an important difference in the academic field between the subjects of computer science (CS) and information systems (IS)/information technology (IT). The latter is the computing topic as taught in business schools, and it has its own curriculum and subject matter, distinct from CS. However, most of the articles in this special issue seemed to interchange the two fields, making the assumption that what’s true of one is also true of the other. One article, in fact, seemed to confuse the fields of “information technology” (it used the term in its abstract and second paragraph) and “information science” (it used that term in its first paragraph). It’s important to realize that IS/IT and information science are very different fields; IS/IT is primarily computing for business students, while the second is related to computing for library and information students.

The reason that all of this distinction is important is this: most of the data showing a gender gap in the computing fields is drawn from CS. It’s unclear if the IS/IT field suffered the same kind of significant female enrollment drop that CS did toward the end of the 20th century. I’ve tried to get definitive data on IS/IT gender enrollments over the period of time when enrollments of female CS students dropped so drastically (in the mid-1980s), and have been largely unsuccessful in obtaining it, but my suspicion is that the IS/IT field hasn’t suffered the same fate as the CS field.

This, in turn, is important because if it can be shown that the gender problem is CS-unique, then it would be possible to do a deeper study of the CS versus IS/IT fields to see why IS/IT didn’t suffer these same problems. Analysis of the CS decline has tended to show, for example, that female participation declined seriously when CS was split off from mathematics faculties, where such programs tended to have their beginnings, and put into its own or a more scientific/engineering school. Females have traditionally pursued math careers at a fairly high level; it might be that this transition of CS programs separating women from the attractive affiliation that math had previously provided is a significant part of the problem. No such change, of course, happened in the IS/IT field.

This letter would be more useful, I realize, if I had the data I’ve been seeking. I’ve made appeals in columns I’ve written in various computing publications, but either IS/IT people simply haven’t kept such data or are unresponsive because they aren’t concerned about the gender barrier problem. I would be pleased to receive gender enrollment data from anyone in the IS/IT field who has it for the period 1980-present, and I promise to follow up with any responders to this appeal with whatever I learn on this matter.

In the meantime, I believe it’s extremely important that CS people become aware that theirs isn’t the only computing field, and that they understand the critical distinctions between the various facets of the computing academic world.

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Erratum

The “About the Cover” for the May 2013 issue (table of contents) incorrectly stated the following: “The cover features in this special issue examine major challenges in computer generated visualization, a field in which researchers use visual representation to gain insight from scientific data.” It should have said, “Visualization is the study of the transformation of data into visual representations to facilitate gaining insight from data. This field encompasses scientific visualization, information visualization, and visual analytics, along with many other subareas.” We apologize for any confusion this error might have caused.—Ed.

We welcome your letters. Send them to letters@computer.org. Letters are subject to editing for style, clarity, and length.