Report on a Case by the Board of Ethical Review

Case No. 85-5

Engineer's Duty to Report Data Relating to Research

Facts:
Engineer A is performing graduate research at a major university. As part of the requirement for Engineer A to complete his graduate research and obtain his advanced degree, Engineer A is required to develop a research report. In line with developing the report, Engineer A compiles a vast amount of data pertaining to the subject of his report. The vast majority of the data strongly supports Engineer A's conclusion as well as prior conclusions developed by others. However, a few aspects of the data are at variance and not fully consistent with the conclusions contained in Engineer A's report. Convinced of the soundness of his report and concerned that inclusion of the ambiguous data will detract from and distort the essential thrust of the report, Engineer A decides to omit references to the ambiguous data in the report.

Question:
Was it unethical for Engineer A to fail to include reference to the unsubstantiative data in his report?

References:
Code of Ethics - Section II.3.a. - "Engineers shall be objective and truthful in professional reports, statements, or testimony. They shall include all relevant and pertinent information in such reports, statements, or testimony."

Section III.3.a. - "Engineers shall avoid the use of statements containing a material misrepresentation of fact or omitting a material fact necessary to keep statements from being misleading; statements intended or likely to create an unjustified expectation; statements containing prediction of future success; statements containing an opinion as to the quality of the engineers' services; or statements intended or likely to attract clients by the use of showmanship, puffery, or self-laudation, including the use of slogans, jingles, or sensational language or format."

Section III.11. - "Engineers shall cooperate in extending the effectiveness of the profession by interchanging information and experience with other engineers and students, and will endeavor to provide opportunity for the professional development and advancement of engineers under their supervision."

Discussion:
On prior occasions, this Board has reviewed the issue of "honesty in academic endeavors." While the facts of those situations are quite a bit different from the facts in the instant case, and probably somewhat more clear-cut, we believe it is useful to review the cases in order to gain a full appreciation of the issues present in this case.

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In BER Case 75-11, the Board reviewed a situation involving an engineer, Engineer #1, who performed certain research and then prepared a paper on an engineering subject based on that research which was duly published in an engineering magazine under his byline. Subsequently, an article on the same subject written by Engineer #2 appeared in another engineering magazine. A substantial portion of the text of Engineer #2's article was identical, word for word, with the article authored by Engineer #1. Engineer #1 contacted Engineer #2 and requested an explanation. Engineer #2 replied that he had submitted with his article a list of six references, one of which identified the article by Engineer #1, but that the list of references had been inadvertently omitted by the editor. Engineer #2 offered his apology to Engineer #l for the mishap because his reference credit was not published as intended.

Not the least bit surprisingly, the Board ruled Engineer #2's conduct not in accord with the Code of Ethics. The Board, noting that "this is a clear case of plagiarism and [is] directly offensive to the Code," indicated that "merely listing the work of Engineer #l in a list of references to various articles only tells the reader that Engineer #2 had consulted and read those cited articles of other authors. It in no way tells the reader that a large portion of his text is copied from the work of another."

While we in no way suggest that the facts of BER Case 75-11 are analogous to those of the instant case, we do believe they suggest the vital importance of "honesty in academic endeavors," and the confusion and distortion that arise when one fails to strive toward that end.

A second case relating to the issue of academic honesty relates to the subject of academic qualifications. In BER Case 79-5 Engineer A received a B.S. degree in 1940 from a recognized engineering curriculum and subsequently was registered as a professional engineer in two states. Later, he was awarded an earned "Professional Degree" from the same institution. In 1960 he received a Ph.D. degree from an organization that awarded degrees on the basis of correspondence without requiring any formal attendance or study at the institution, and was regarded by state authorities as a "diploma mill." Engineer A listed his Ph.D. degree among his academic qualifications in brochures, correspondence, etc., without indicating its nature.

The Board found that Engineer A was unethical in citing his Ph.D. degree as an academic qualification under those circumstances, noting that "Engineer A is charged with knowledge of the accepted standards of the profession. In stating that he had a Ph.D. degree, he should have been aware that those who received his communications would be deceived."

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Those two cases, although quite a bit different from the case at hand, are extremely useful in understanding the vital importance of honesty in academic endeavors, and particularly in the field of engineering research. While at first blush, those two cases do not appear to present particularly crucial issues involving honesty in academic endeavors, they do suggest an important point. Both cases reveal what could probably best be described as a kind of "intellectual laziness" on the part of the engineers in question. Both are fairly simple cases: An engineer who engages in plagiarism is not ethical. Nor is an engineer who tries to puff up his credentials with a degree secured through a "diploma mill" ethical.

But what about the instant case? Is an engineer who fails to include unsubstantiative data in his graduate report unethical? In view of the fact that no BER decisions have heretofore examined this question, it is necessary for the Board to examine the pertinent portions of the Code of Ethics.

We think that Section II.3.a. is a good starting point. That provision unambiguously enunciates the ethical duty of the engineer in this area. The engineer must be objective and truthful in his professional reports and must include all relevant and pertinent information in such reports. In the instant case, that would suggest that Engineer A had an ethical duty to include the unsubstantiative data in his report because such data were relevant and pertinent to the subject of his report. His failure to include them indicates that Engineer A may have exercised subjective judgment in order to reinforce the thrust of his report.

Section III.3.a. is also relevant to our inquiry. In a sense, Engineer A's failure to include the unsubstantiative data in his report caused his report to be somewhat misleading. An individual performing research at some future date, who relies upon the contents of Engineer A's report, may assume that his results are unqualified, uncontradicted, and fully supportable. That may cause such future research to be equally tainted and may cause future researchers to reach erroneous conclusions.

Finally, we believe that Section III.11. should play a part in our discussion. We do not see how Engineer A could be acting consistently with that provision by failing to include the unsubstantiative data in his report. By misrepresenting his findings, Engineer A distorts a field of knowledge upon which others are bound to rely and also undermines the exercise of engineering research. Although Engineer A may have been convinced of the soundness of his report based upon his overall finding and concerned that inclusion of the data would detract from the thrust of his report, such was not enough of a justification to omit reference to the unsubstantiative data. The challenge of academic research is not to develop accurate, consistent, or precise findings which one can identify and categorize neatly, nor is it to identify results that are in accord with one's basic premise. The real challenge of such research is to wrestle head-on with the difficult and sometimes irresolvable issues that surface, and try to gain some understanding of why they are at variance with other results.

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Conclusion:
*It was unethical for Engineer A to fail to include reference to the unsubstantiative data in his report.

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