

Perspectives on (the lack of) STS in nuclear engineering education

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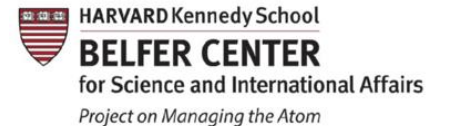
Harvard Kennedy School

Program on Science, Technology & Society (STS) | Project on Managing the Atom

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Opinion | At Work | Education

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STEM Crisis? What About the STS Crisis?

Science, technology, and society programs will become more effective if they're embraced by scientists and engineers

By **Susan Hassler**



What can STS training help us understand?

The interrelationships between science, politics, and law, and the role of technology in power structures and governance, and how these manifest materially

How science and technology *embed and are embedded in* social practices, historical trajectories, identities, discourses, norms, values, imaginaries, institutions, and bureaucracies [Jasanoff 2004]

That science and technology is never not situated in a political context [Winner 1980]

Some challenges

“Let the politicians worry about it”

Dominant narratives about

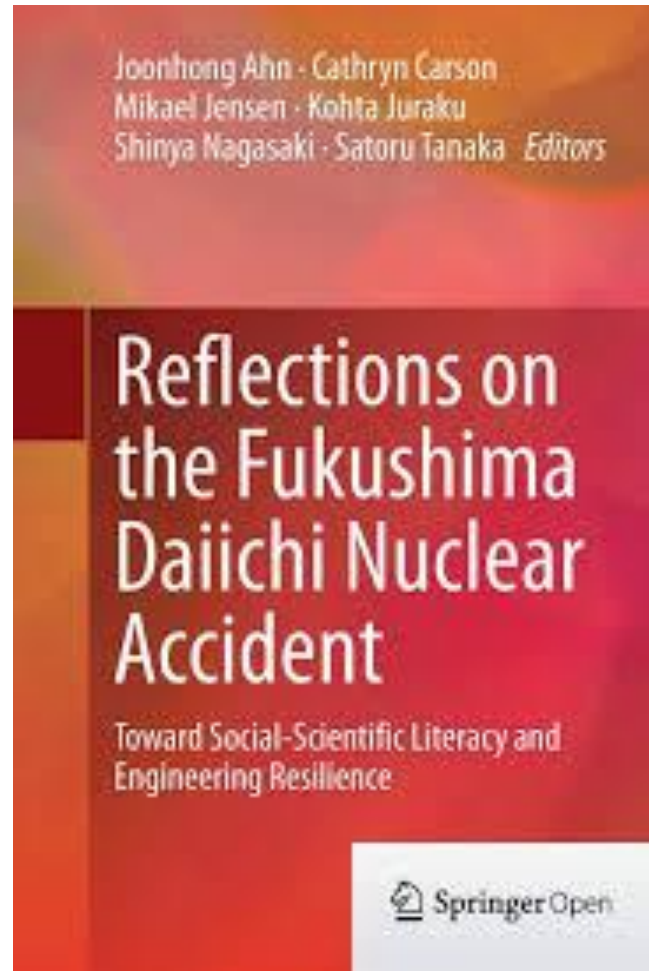
safety,

risk,

communication with “the public”,

“anti-pro” dichotomies

Some successes



Nuclear engineering curricular imaginaries

Is it desirable to leave narratives of social dimensions of nuclear technology up to the discretion of individual faculty just as we do with?

Do we need to reconsider what should be institutionalized? Does STS education have room within current curricular structures and top-down university policies?

Should we be asking “how” or “whether”?

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Do Artifacts Have Politics?

IN CONTROVERSIES ABOUT TECHNOLOGY AND SOCIETY, there is no idea more provocative than the notion that technical things have political qualities. At issue is

they create the theory that underlies U.S. nuclear strategic practice.

My reason for wanting to spend a year among these men was simple, even if the resulting experiences were not. The current nuclear situation is so dangerous and irrational that one is tempted to explain it by positing either insanity or evil in our decision makers. That explanation is, of course, inadequate. My goal was to gain a better understanding of how sane men of goodwill could think and act in ways that lead to what appear to be extremely irrational and immoral results.

reality behind the words.

Anyone who has seen pictures of Hiroshima burn victims may find it perverse to hear a class of nuclear devices matter-of-factly referred to as "clean bombs." These are weapons which are largely fusion rather than fission and which therefore release a higher quantity of energy not as radiation but as blast. Clean bombs may provide the perfect metaphor for the language of defense analysts and arms controllers. This language has enormous destructive power, but without the emotional fallout that would result if it were clear one was talking about plans for mass murder,

