

A dominant design of design engineers? A view from STS

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STS=Science and Technology Studies

- A set of sensitivities:
 - The complexities of human/non-human interaction
 - Science and technology as achievements, performances, enactments
 - Sociotechnical outcomes as coproduced by knowledge and politics

Topics

- The moral economy of engineering/engineering design
 - Linguistic representations
 - Constructions of 'proper engineering practices'
 - Distribution of knowledge in time and space
- The modest engineer

Linguistic representations of engineering

- Dominant use of gerunds – engineering, design-ing, mak-ing, construct-ing, etc.
- -> priveleges action over plans and reflection, engineers are linguistically enacted as doers rather than thinkers

Linguistic hierarchies

- Some examples
 - designing rather than calculating or simulating
 - problem-solving rather than problem formulation or assessment
 - making rather than advising
 - constructing rather than testing
 - creative rather than critical
 - things rather than services
 - innovation rather than regulation
 - industry/manufacturing rather than government
- Produces a dominant image of the authentic engineer that others the majority of people trained as engineers

What should design engineers be doing?

- Design only?
- Or
 - assessing/testing?
 - knowledge brokering?
 - regulating?

New spaces for engineers?

- New disciplines (e.g., STS) may work to facilitate change, as catalysts of hybrids, diversifying engineering
 - We need to know more about what actually happens
- Extending training or developing more extensive and heterogeneous collaborative practices?

New distribution of knowledge

- The established topoi: the knowing individual subject
- Reflecting on time and space
 - What is the role of experienced engineers compared to recently educated
 - New distributions of relevant knowledge across “engineering relevant” disciplines or hybrids
 - More collaboration, less boundary work?
 - The polytechnical individual versus the heterogeneous team

A moral challenge

- Inherent dangers in extending engineers' education
 - Professional chauvinism
 - Not invented here-syndrom

The modest engineer

- a de-centred subject
- polyvalent specialist
- ethics of care with respect to humans as well as non-humans