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## IST 530: Week 4 Reading Notes

## Topic: Technological Determinism and Functionalism

## Summary of key points and arguments

#### Mathewman, Steve, (2011). Technology and Social Theory, Macmillan International Higher Education.

The introduction is a broad overview of the rest of the text and a brief description of how the chapters are constructed. Each chapter within the book introduces the key points of a thinker, theme, or school of thought, followed by their context, what they were influenced by, and critique of their approaches. These key points are *navigation*, *illumination*, and *comprehension*, these terms were primarily pulled from what technology does.

Chapter 1 covers the basics of “what technology is” and presents the definition of technology as: objects (virtual or actual), activities, knowledge, modes of organizations, and sociotechnical systems. This definition was proposed to avoid the ‘hazardous’ concept that technology is ‘everything’. The chapter also introduces sociotechnical systems while emphasizing the connections made between technology and society. For instance, these systems are molded by social influences, such as power (e.g., ownership) and historical context. Moreover, the success of a sociotechnical system depends largely on the social context (e.g., culture, existing infrastructure).

#### Sutton, R. I., & Staw, B M. (1995). What Theory is Not. Administrative Science Quarterly, 40, 371-384

The article advocates that in order for the field to produce stronger theories, journals have to be more inclusive of papers that test or use part of a theory. The article also distinguishes between the elements of 1) data, 2) references, 3) variables, 4) diagrams, and 5) hypotheses from theory. Sutton claims that distinguishing the five elements as *what theory is not* is easier, because there is more of a consensus about *what a theory is not*.

The problem with theory is that: 1) lack of consensus on what theory is – what it encompasses, what it means in terms of prerequisites (e.g., does the theory have falsifiability?), 2) biases by reviewers for particular theories may have resulted in the subjective and/or unfair rejection of publications and manuscripts, and finally according to Weick (1979), 3) tradeoffs between generality simplicity accuracy for logically consistent and integrated arguments .

There is a lack of agreement over whether a model and a theory can be distinguished, moreover, the lack of distinguishing what a theory is or is not, and where the strength of the theory lies (e.g., how interesting or if falsifiability is necessary) threatens the meaning of theory. Sutton and Staw cite Merton and states that theory as a term threatens to become meaningless, because its covers too many diverse terms. Sutton and Staw states that these problems with theory arose out of a combination of two primary factors: 1) social science not focusing on training theory construction, and 2) not enough talent to be strong theorists.

DiMaggio, P. J. (1995). Comments on what “Theory is Not.”

DiMaggio is not countering Sutton and Saw but extends upon the problems that Sutton and Staw identified (lack of training in theory construction and not enough talent for theory), to encompass three additional factors. The first of the three issues are that there is often more one perspective of what a good theory is. These perspectives include theory as covering laws, theory as enlightenment, and theory as narrative. The second issue that DiMaggio identified was that ‘good theory splits the difference’, in that theory Is difficult to teach because many of the theories are hybrids or include multiple approaches. Finally, another issue is that the theories—even the best hybrid theories are often produced post hoc, which means that the theories “take a life of their own” after their original construction.

*Weick, Karl (1995). “What Theory is Not, Theorizing Is”.*

Weick, is more of a critique of Sutton and Staw’s approach; however, he agrees with Sutton and Staw that better theory is needed. Weick states that the problem with their approach is that the five identified by Staw (e.g., data, references, lists, diagrams, and hypotheses) are ruled out simply as “not theory” would only be a plausible solution if the problem with ‘theory’ was “lazy theorizing’. Weick discusses the tradeoffs between process of theorizing and the product of theory. Overall, in terms of impact for ASQ, he proposes that instead of a rejection for a manuscript that includes the five parts identified by Sutton and Staw, a revise and resubmit could be proposed to clarify both the theorizing process and the final theory.

## Integration with personal interest/work

Currently it appears that Sutton and Staw’s perspective is more dominant or at has at least grown—in that papers can be published without a strong foundation in theory. From a personal experience, I was part of a research project in Taiwan. The project was an exploratory probe into how policy was impacting the ride-sharing drivers in Taipei. The results from the 19 interviews were iteratively analyzed. However, theory was not directly applied during both the initial conceptualization of the study and analysis of results. Although, there were vague links to a theoretical model – e.g., Jackson’s Policy Knot (Jackson, 2014), the model was more of a suggestion for the interaction between policy on the practice and design of technology, rather than a highly structured framework. While, some of the research project could be loosely framed in theories—such as activity theory, it was not included in our paper nor was the usage of theory strongly considered.

In other words, from Sutton’s classification my paper would have included a ‘reference’ and not a ‘theory’, and from the principles of ASQ—Administrative Science Quarterly at the time the paper would have been rejected for not including theory.

References and Suggested Reading Order

Below is a crude flow-chart of how the readings are connected and the suggested order in which to read these articles. Begin with the text *Technology and Social Theory* by Matthewman for an introduction to social theory in technology and a description of what technology is/does and how technology has been theorized. Then read Sutton’s “What Theory is Not” – both DiMaggio and Weick’s are a response to Sutton’s article.

1. Mathewman, Steve, (2011). Technology and Social Theory, Macmillan International Higher Education.
2. Sutton, R. & Staw, B. (1995). “What Theory is Not.”
3. DiMaggio, P. J. (1995). Comments on what “Theory is Not.”
4. Weick, Karl (1995). “What Theory is Not, Theorizing Is”.
5. Jackson, S. J., Gillespie, T., & Payette, S. (2014, February). The policy knot: re-integrating policy, practice and design in cscw studies of social computing. In *Proceedings of the 17th ACM conference on Computer supported cooperative work & social computing* (pp. 588-602). ACM.

Matthewman

Introduction and Chapter 1

Sets up concepts for understanding

Weick, Karl (1995). “What Theory is Not, Theorizing Is”

Critiques

Critiques

Sutton, R., & Staw, B. (1995). “What Theory is Not”

Di Maggio, P.J. (1995). “What Theory is Not”