Week 2: Challenges within Constructive Research

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# Challenges within Constructive Research

Constructive design is one of the most common research methods for information systems and technology (Silvestrini & Sammito, 2012). The methodology revolves around building artifacts, studying outcomes, and then deriving novel observations. During this process, the researcher needs to be cognizant of ethical and quality challenges. When the authors fail to address those risks, their efforts conclude with unacceptable and unused results.

# Ethical Challenges

Ethics are a system of moral principles that dictate the norms of a group. Societies implement these systems through social constructivism, enabling and constraining the group’s actions (Burr, 2015). Communities leverage this mechanism to assign truths and then infer a concept’s value (Gergen, 2010). Consider a project that seeks to prove that men are superior to women. Within a chauvinistic cohort, these results align with their world views and are ethical. However, a diverse group would chastise the very idea, regardless of methodology. Further complicating the matter, ethical identities are dynamic and evolve (or regress) over time.

Researchers need to understand their internal biases, in addition to the audience’s norms. Everyone has historical and cultural defaults that lead to prejudices. These subtle classification differences influence our language, which constructs reality (Owen, 2017). Picture two people, one fat another thin. Then change those definitions to obese and anorexic. Did all four imagined people have the same gender and race? Words matter and one needs to choose them carefully.

Numerous professional, regulatory, and advisory groups create frameworks that outline strategies for approaching ethical designs. These professional standards can contain conflicts of interest, hidden agendas, and inconsistent moral standards (Tan, 2021). The Belmont Report (1979) famously defines three core principles: respect for persons, beneficence, and justice. These tenants ask researchers to treat everyone fairly and avoid harm. However, even this simple statement has ambiguity. After fourth years, the ethical code requires modernization to align with the evolving worldviews. Adashi et al. (2018) argue that the Belmont Report’s “distinction between research and practice is disappearing within the commercialization of present-day research (pg. 1347).”

Debates around the notion of “harm versus setback” demonstrate the need for more clarity. Roberts (2021) states that researchers “must focus on risks of the research process itself, not outcome-related risks as downstream consequences are beyond the purview of ethical gatekeeping (pg. 15).” Under this framework, an organization like Facebook can ethically track relationships between billions of people. It has a moral (and potentially legal) mandate to protect its user’s privacy. However, it is not bound to prevent malicious use-cases (e.g., election interference). While this position resonates with specific cohorts, it faces fierce opposition from others.

# Quality Challenges

High-quality research must pass three litmus tests, specifically, that it is non-obvious, elegant, and practical (Zeller, 2014). Regardless of the methodology, a professional group would laugh at studies like *Sitting in chairs helps people rest*. Without delivering new information, the effort cannot contribute to the body of knowledge. Meanwhile, the similar study *Effects of carpal tunnel from sitting in chairs* identifies a business problem and concrete use-case. This framing enables the researcher(s) to perform a literature review and recommend a new iteration or application.

Bryar and Carr (2021) describe the “Working Backward” methodology to produce high-quality innovations. Their framework begins identifying customer’s needs, determining outputs that cause that eventuality, processes that lead to those outputs, and finally, the inputs into that system. Since the researchers always know the end-state, they can enumerate User Acceptance Tests (UAT).