Complex but approachable problems: research-informed research systems for policy-enabled, socially supported socio-environmental health equity and sustainability research

Research systems are on the precipice of large-scale cultural re-orientation. Across research fields, researchers are advocating for attention to pressing social, environmental, and health problems that require urgent, sustained attention. Our ability to successfully address these problems, however, is not only a question of research focus, but also one that requires reconfiguration of relationships across science and with other segments of society. To successfully mobilize scarce resources, it is necessary to reflexively question how we frame, design, and elicit support for research endeavors, share research experiences and outcomes, and assess our work. Research trends that may be drawn on to emphasize how we can more directly frame research outcomes in the problem space include approaches such community engagement and direct consideration of the dimensions of research performed in the context of the research space. I briefly discuss how these two approaches may contribute to needed meta-research conversations and facilitate emphasis on societal impact. A third strand essential to this endeavor, opening up research processes to investigation and assessment, is left for future discussion.

Fundamental to this conversation is development of shared definitions of equity and sustainability, and the relationship between the two. In health, equity, distinct from equality, is most succinctly defined as having moral and ethical dimensions, and referring to differences that are “unnecessary and avoidable but, in addition, are also considered unfair and unjust” (Whitehead, 1992). Beierle and colleagues (1999) link sustainability, “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (World Commission on Environment and Development (WECD), 1987) to equity through the concept of inter-generational equity. It is helpful to draw on these traditions not only as a basis for the development of frameworks we can use to identify dimensions of difference, but also to establish connections with past conversations about health and environmental sustainability research and identify intersections with ICT sustainability.

Researchers attend to outcomes measures, and therefore we should endeavor to measure dimensions central to intended outcomes. Barring direct measurement of intended outcomes dimensions, we should measure that which research suggests is associated with our intended outcomes, and prerequisites for intended outcomes. Accordingly, it will be helpful to not only identify and interpret that which easily succumbs to measurement, but also identify that which ideally should be measured because of the potential to inform research in line with our broader objectives. Though measurement and evaluation takes resources away from our central objectives, for example, sustainability ICT, given our audit culture (Strathern, 2000) and the role of outcomes assessment in directing research and establishing a basis for implementation, initiatives intended to shape assessment will contribute to intended outcomes.

Community engagement is one important element developing ethical, just research initiatives. Through community engagement, we can develop multiple perspectives of the problem space and research intended to address urgent societal issues, understand the impact of research on communities, and develop research partners to frame, contribute to, and implement outcomes of research. Several models of community engagement have been developed, ranging from citizen science projects that cultivate and engage citizen-researchers to contribute to research projects, to approaches such as community-based participatory research (CBPR), which emphasize engagement with communities to shape research and which advocates community empowerment and community ownership of research. In ICT research, we have the opportunity to address community engagement both in terms of explicit
engagement in research and through consideration of implicit engagement. Through ICTs, we are expanding research participation through use of trace data, footprints of everyday practices, that are available for capture in surveilling ICT systems. It is necessary, therefore, for us to consider not only overt, but also implicit community engagement.

A second thread that may be mobilized to support sustainability ICT research is closer alignment of research assessment with the potential to have intended societal impacts. Recent research (e.g., Evans, Shim, and Ioannidis, 2014) demonstrates the potential of integration and visualization of research and domain datasets to communicate the distribution of research across dimensions of societal importance. Though this approach emphasizes the distribution of research rather than research outcomes and implementation, equitable distribution of research is likely a prerequisite to equitable outcomes that support sustainability. In our nascent local efforts towards what we are currently calling visual meta-synthesis, we are focusing on use of data integration, visual overlay techniques, and plan to engage with community members to consider how we might effectively represent dimensions of research that are and are not addressed in research on risky health behaviors. We have envisioned this project as a negotiation and exploration of past research in the context of community values. Through emphasis on visual communication, we echo observations that “visualizations provide opportunities for local people to explore, analyse and represent their perspectives in their own terms” (Cornwall and Jewkes, 1995, p. 1671).

References


