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Sociotechnical Imaginaries:
A Possible Contribution to Science Education

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Abstract:

This is a conceptual paper that highlights notions of *sociotechnical imaginaries* (STIs; Jasanoff, 2015) from fields of Science and Technology Studies (STS) that seem relevant to science education aimed at preparing critical and active citizens (Bencze, 2017). We extend our discussion to fields of future studies in science education to argue that a needed direction is not merely to get students to imagine desired (often personalized) futures (especially given social and environmental harms), but to interrogate how products of science and technology seem to delimit kinds of futures we ought to desire. That is, technoscientific futures are not just out there, but are already present, actively fashioning current practices and values. Drawing from STS literature, we demonstrate how STIs are enacted through two current technoscientific products: self-tracking devices and algorithms. We argue that such technoscience products have an active role in constructing certain kinds of individuals/publics (e.g., quantified citizens, calculated publics). Roles of material technologies in normalizing moral and political visions and future orientations need to be explicitly addressed in re-centering nature of technology as

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156

inseparable from nature of science (Roth, 2001). Notions of STIs further offer more nuanced approaches to discuss power at the interface of the public/private within STSE Education (Pedretti & Nazir, 2011). Finally, notions of STIs may present us with new ways for (re-)encountering affect in science education (Alsop, 2016), as feelings of hope and anxieties contour (how we come to re-envision) imaginaries grounded in technoscientific worlds.

Keywords: sociotechnical imaginaries; science education; future studies

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Biographical Notes

Sarah El Halwany is a PhD candidate at the Ontario Institute for Studies in Education (OISE), University of Toronto. Her research looks at how science education is affectively enacted and embodied. She is also interested in pedagogical approaches that connect Science, Technology, Societies and Environments (STSE).

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Larry Bencze is an Emeritus Associate Professor in Science Education at the University of Toronto. His research emphasizes critical analyses of science and technology, explicit teaching about problematic power relations and student-led, research-informed, sociopolitical actions to overcome social and environmental harms associated with fields of science and technology.

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158