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Problems of and Possibilities in Designing for the “Other” 90%

This paper reviews some of problems and possibilities faced by engineering design initiatives seeking to address the needs of the global poor, with the goal of offering theoretical tools for pedagogically enriching such initiatives. The paper uses two empirical data sets: 1) Student projects in Rensselaer’s Product Design and Innovation (PDI) program and 2) Cooper-Hewitt’s “Design for the Other 90%” exhibit and PDI student responses to that exhibit. “Development engineering” education initiatives are promising for their potential to expose undergraduate students to global inequalities, real-world design challenges, and the scope and complexity of development problems. However, these initiatives also threaten to reinforce problematic assumptions about poor populations, their abilities and needs, and the proper role of outside “experts” in contributing to contextualized problem solving. The paper draws on Science and Technology Studies literature on expertise to offer alternative ways of framing development engineering problems that respect the highly varied terrain of expert knowledge in development contexts and ways of framing solutions appropriate to such contexts.