

Technology is an inseparable part of our daily lives, yet technological breakdowns call into question our understanding of these inseparable and essential arrangements. Understanding that things break and having access to repairing broken things - whether through self-repair or consulting repair service - is a step towards creating resilient attitudes amidst breakdowns. Repair technicians attend to not only breakdowns but also to educating end users. The analytical focus for this past summer's CREATE project investigates the following three aspects of performing repair: (1) *communication practices* - forms of language used to speak with end-users, work colleagues, and superiors, (2) *forms of expertise* - the types of knowledge repair workers draw upon to perform successful repairs, and (3) *affective experience* - the types of relational dynamics that undergird a repair technician's work. By investigating these three themes, this work aims to contribute to a knowledge base of the lived-experiences and interpersonal dynamics of performing technical service repair, a critically understudied context in social-computing studies.

Over 3 months, I interviewed 15 participants who perform technical repair in a variety of settings. My recruitment took place via social media outreach and in-person visits to repair work sites such as phone repair mall kiosks and urban community repair events. Of the participants, 12 were career IT workers whose roles were specifically in supporting internal technical issues. 4 possessed a background in IT help desk work, 6 in retail technical repair work, and 2 had no professional background in IT but possessed a strong personal interest in performing technical repair. Of the 3 participants who were not professionally aligned with traditional IT work were those who possessed a personal interest in either technology, repair, or both. While additional interview participants are continuing to be recruited and interviewed and data analysis is still in progress, the preliminary findings relating to *communication practices*, *forms of expertise*, and *affective experience* are below.

*Communication practices* were overwhelmingly determined by a need to first access a problem. This manifests in a variety of settings. Participants reported needing to first perform some form of "helpfulness" in order to better draw out more information from the client before troubleshooting and subsequently undergoing repair. The communication that occurs at this stage is critical: without this step, a timely resolution of an issue was hampered by a lack of information. This finding dovetails into the *affective experience* when performing repair. The affective experiences were mainly tied to their perception of the end-user, especially those who they report "come in hot," and "aren't interested in knowing how this stuff works." Clients who were aggrieved required more empathetic language before workers were able to engage in troubleshooting inquiries.

*Affective Experience* was also tied to *Forms of Expertise* in their workplace relationships. The relational dynamics between their supervisors were separate from that of their peers and colleagues in their accessibility, and on occasion, credibility. When interfacing difficult help-desk tickets, workers reported being able to access their colleagues much more readily than their supervisors. And necessarily too: many of these colleagues handed-off tickets amongst each other per need and level of escalation. Supervisors were only called upon to handle the most

difficult tickets, beyond either the workers' scope of expertise or sometimes beyond the scope of affective support.

*Resiliency* alone has become a strained concept in the context of technical repair work. Underneath the ability to bounce back from difficult technical problems is the need to possess sufficient *emotional resilience* that undergirds both material and relational aspects of their role. At the beginning of the study I originally conceptualized resiliency as deeply tied to technical knowledge vis-a-vis infrastructural inversion. That is certainly true to some extent for the repair workers; many have cited that their curiosity and fearlessness towards technology has rewarded them not only with the know-how and confidence in interfacing breakdowns, but also put them in the path of lucrative career opportunities and trajectories. Much of what the participants explained when performing alignment and empathy convey an absolute need to perform emotion for the client. Repair workers referred to moments of performing labor as "active listening," "smile and nod," and one even referenced making apologies to "let them hear what they want." However, despite their irritations in needing to perform emotional labor for irritable clients, it seems repair workers exercise support from a place of genuine empathy and understanding. One participant reported that they, too, are "end-users" who similarly experience frustration when technology fails. By bringing this experience to their work, they are able to conceptualize a language to better placate the client in order to provide timely care of both clients and their technology.

This project will continue to collect more interview data to develop a more nuanced image of the role of emotional resilience in articulation work in repair work. By foregrounding repair work I intend to foreground the invisible labor that exemplifies repair work. In investigating the invisible labor of articulation work needed to perform service repair, I intend to contribute to a growing body of knowledge around the forms of labor and expertise needed in ever increasingly technologically-dependent societies. I aim to help shed light on the ways societies co-exist with technology through an understanding of the emotional resilience required in articulation work. By thoroughly investigating the lived experiences and conditions of breakdowns, I aim to alleviate individual burdens of maintaining and repairing at-home technological ecosystems in service of creating a future of increased human reliance under conditions of inevitable technological breakdowns.