Abstract originally submitted

A spectrum of stance: How non-expert communities communicate with institutional experts on digital platforms

Communities increasingly engage with and adopt various attitudes towards institutional experts on social platforms. Discussions about the pandemic, vaccines, and masks demonstrate a *spectrum of stances* that spans from trusting experts' advice to playing the skeptic, spreading incorrect information, and even rejecting experts' work and opinions. The rising tensions between institutional authority and digital social movements across many domains (Earl 2022) underscores the importance of studying varied forms of public participation in institutional processes. This abstract presents a qualitative study that explores the interactions of a rare neurodegenerative disorder community with multiple categories of experts, including scientists and regulators. The aim of this study is to gain a deeper understanding of how non-experts strategically employ language to assume different stances toward experts. To accomplish this, the study draws on theories from various fields–citizen science, communication, and linguistics–while proposing strategies to harness the complementary strengths of the humanities and computing.

People engage with scientific experts in different ways. By contributing data (e.g. birding with apps) or via explicit participatory research protocols (Ottinger 2017), non-experts contribute to scientific knowledge while fostering collaboration with experts. People can also interpret data via their prior beliefs and lived experiences (D'Ignazio and Klein 2020), thereby contributing perspectives that can challenge experts and cause tension and adversarial interactions. Grasping the objectives, mechanisms, and outcomes of online interactions is important to understand such dynamics. However, current computational techniques for analyzing online posts often struggle to capture the rich and nuanced aspects of human language (Baden 2021).

ALS is a terminal condition with no cure; the ALS community is also known for successfully using digital platforms (e.g. the Ice Bucket Challenge). We present two tweets demonstrating a stance towards experts that are similar yet subtly different.

"*You haven't approved <drug> for suffering and dying #ALS patients to have an opportunity to improve their quality of life and extend their lives, even though the #FDA and neurologists both know that <drug> works. Approve <drug> and stop torturing #ALS patients*!" We note the use of deontic verbs ("approve"), the use of exaggeration as a rhetorical tool ("torturing"), and claims about experts' knowledge (saying that experts know the drug works). This tweet suggests an aggressive, authoritative stance that questions experts.

"*How many more loved ones have to lose their Valentines to #ALS before the #FDA will use its regulatory flexibility to approve drugs that show promise for some. ALS is 💯 fatal Progression STOPPED, REVERSED in some! All pALS deserve the chance for more Valentines! #<drug>*." This speech demonstrates procedural knowledge ("regulatory flexibility"), affective appeals (Valentines), and claims about the drug's efficacy ("STOPPED"). This post takes a more muted stand towards experts.

Instead of framing community-expert interactions solely as adversarial or supportive, this research contributes a novel codebook for understanding the various stances people take towards institutional experts. This work provides building blocks for designing digital platforms and collaboration opportunities between computing and humanities scholars for greater participatory knowledge-making.