To app or not to app?
Understanding public resistance in using COVID-19 digital contact tracing

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Extended abstract

In the context of the COVID-19 pandemic, contact tracing apps have been developed and released in several countries, including the United Kingdom, as an additional measure to combat COVID-19, speeding up the tracing of contacts of people found to be infected. At the core of this approach is the fact that, although the new coronavirus spreads too fast to be contained by manual contact tracing, it could be controlled through the use of automatised contact-tracing (via an app), if used by enough people, which would help contain the pandemic. These apps are generally based on practical hardware technologies, so basically anyone with a smartphone can use and implement their use. In practice, however, these type of apps lack sufficient real-life testing, which is problematic as their effectiveness, regardless of the technology used, depends as much as on socio-behavioural factors, such as public confidence and trust in the protection of privacy.

Indeed, existing studies point to growing public resistance to such apps. Yet, there is limited sociological and criminological insight into the mechanisms underpinning this resistance. Existing criminological studies of surveillance techs focus mainly on coercive systems such as electronic monitoring devices. The paucity of criminological insight is surprising not least because the problem of resistance to official, policy driven techs is of great relevance to the discipline, particularly to the fast-growing strand of criminology that focuses on the design and adoption of emerging data-driven technologies, some of which include the rapidly proliferating predictive algorithms.

To address the dearth of criminological insights, this study draws on sections of the AI design literature that explore User eXperience (UX) of data-driven technologies and algorithm aversion, and relies on an interdisciplinary approach bringing together criminological and computational expertise to unpack this issue from a novel standpoint, unravelling key social dynamics underpinning people's resistance to the NHS contact tracing app across England and Wales. From a criminological standpoint, our study of the digital tracing app should uncover new insights that can expand current understandings of resistance to the new data-driven surveillance technologies currently transforming the landscape of decision making across the private and public sector, including the justice system.

To explore public discourse about the England and Wales' COVID track and trace app and identify mechanisms of resistance, we analysed a large dataset of tweets. We identified three main parts of the network (isolated individuals, disconnected small groups, and a connected core), with some differences in the type of accounts involved, and the themes discussed. The prevailing narrative frames (lack of trust; negative liberties) and mechanisms (polluted information; conspiratorial thinking; reactance) at the basis of people's resistance in using the app are also discussed in the study.

Our interdisciplinary research team adopted an exploratory and iterative process that aimed to make larger (and more complex) datasets better accessible to qualitative investigation, to untangle our research puzzle in a more comprehensive way. The interaction between the computer scientist managing the data collection and quantitative aspects of network analyses and the social scientists providing subject matter expertise and theoretical oversight enabled us to observe general trends and well as to 'zoom in' and analyse more in-depth sub-sets of data of particular relevance. We aimed to unravel the various insights available from (a) the language used in the tweets, (b) the context of the authors of the tweets, and (c) the interactions between the authors that contributed to a 'national conversation', as the topic at the core of the tweets analysed is likely to be relevant to a very broad segment of the population, as it is about a behaviour that the entire adult population of England and Wales was expected to engage in. While this discussion was played out in more social platforms than Twitter, and in more spaces than simply online, Twitter allowed us to examine some aspects of these wider conversational engagements.

The conversations (and the lack of conversations) taking place in our dataset suggest some avenues of further research, with practical implications for the public health communication of health-sensitive topics. From a strictly criminological perspective, our findings reinforce insights from the UX literature, highlighting key dynamics that should be integrated into any framework for understanding public resistance to new digital technologies, particularly surveillance systems such as digital tracing apps.