

Using data donation from smart home technologies to understand the sociodigital futures of caring relationships

Dr Nicola Horsley, Centre for Sociodigital Futures, University of Bristol

Nicola.horsley@bristol.ac.uk

This paper will explore how mixed methods research on families' use of smart technology can reveal architectures of care in the home. While many of the apps and devices that have come to constitute the internet of things (IoT) in the domestic sphere have originated from assistive technologies, their now ubiquitous presence and marketing to the generic consumer (Rideout and Robb 2020). can obscure the diversities of households' everyday interactions, which may include creative adaptations and subversion of designed uses.

Care dynamics are in flux as parents make use of apps that change what it means to be 'there' for their children, in terms of both co-presence and being a deferred to source of support; and children gain status, and the ability to take on new roles, through their affinity with technology in the home (Wang et al. 2023; Porcheron et al. 2018). Children's digital proficiency subverts traditional family hierarchies as they breach security measures and parents resort to appropriating the higher authority of smart devices (Garg and Sengupta 2020). These changing dynamics have been documented in recent studies but the nuanced ways in which technologies become embroiled in, and reconfigure, practices of care, are yet to be explored in depth.

Existing sociological studies of smart home technologies rarely make use of the data that are central to research questions concerning the place of the digital in everyday life. While qualitative methods such as interviews offer invaluable insight into the nature of what families ask of AI, the data and metadata these apps store in their logs reveal the architecture of interactions, in terms of frequency of use, repeated routines and how smart home technology use corresponds with different activities in families' everyday rhythms. This paper reports on a study employing a methodology uniquely combining qualitative fieldwork, including child-led methods, with insights from data donation, which offers a glimpse of family life as it is mediated by smart technologies, while unmediated by researcher intervention (as opposed to studies that have supplied households with devices and reported on 'out of the box' experiences, excluding the key demographic of those who have already invited such technology into their homes).

This paper asks: does the sharing of data for research purposes raise more ethical questions than sharing with commercial interests?; how should we conceptualise data collection when it is consensual yet data generation pre-dates the research process?; and how can data from domestic IoT be used as part of a methodology that reveals emergent care dynamics that challenge current categorisations?

Through these methods, we can better understand what forms of care the digital enables, where communication technologies and AI fit within the assemblage of caring relationships and dynamics between parents, children and the smart home, and what sociodigital futures are made possible through new inclusions and exclusions. Ultimately, through studying the mundane ways in which families incorporate the digital in their everyday lives, we can ascertain what conceptualisations of care new developments in smart technologies should be designed to serve and how.