Regional Studies Special Session: Digitalisation, Hyperconnectivity and Rural Futures

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Our session at the annual Regional Studies Association conference in Florence (June, 2024) saw four very contrasting papers that lead us to reflect on the disparate nature of rural digitalisation and hyperconnectivity. Firstly, the topics of the four papers were diverse – covering experiences of rural ageing (Ingmar Pastak), remote working (Gary Bosworth), social media usage among farmers (Leanne Townsend) and experiences of interacting with nature, as a critique of postdigital theory (Jack Reed). Secondly, the framing of digitalisation and hyperconnectivity highlighted the dissonance that remains in rural digital debates and thirdly, a new set of questions arose about "who is connected to who, what or where?"

Digitalisation in rural areas is both a mature, and a cutting-edge area of research. Recent decades have seen rapid technological advancements resulting in

increased embeddedness of digital technologies in our daily lives. This process of digitalisation has transformed our ways of being in radical ways, often for the better but in some cases causing significant inequalities (Rijswijk et al. 2021). With digital devices now pervasive in everyday lives, those who are not part of the "hyperconnectivity" can feel socially and culturally isolated (Candiotto, 2022) and economically, the digital transformation of production and innovation is impacting income dispersion (Bauer, 2022).

A central theme of the rural digitalisation debate concerns inequality, not just in terms of access to digital technologies, but increasingly the skills and confidence to use digital tools and services, and the implications for unintended social and cultural forms of exclusion. This was succinctly highlighted by the Smartification research in rural Estonia (Pastak) where the different ways in which we learn to use online tools generates fear among late-adopters and, as a result, can create cognitive barriers to adoption. The corollary of this can be particularly damaging if services moving online are then perceived to be out of reach and lead to a change in physical behaviour such as not visiting the doctor or not using banking services for fear that these are no longer accessible in-person. The design of e-services that require users to learn and adapt as they use the service contrasts to previous expectations of older generations who are accustomed to learning first. This presents a more ontological, deep-rooted and often unseen form of digital exclusion.

By contrast, digital technology can be used to reduce barriers to participation in new activities or new spaces. The ways in which virtual nature spaces offer access to 'nature' was discussed by Reed, particularly in relation to postdigital theory. The premise of the postdigital is that we are no longer in a world where we may reasonably expect to be 'technology free'; digital and online spaces always seek to define our situation. In a PhD research project carried out in the United Kingdom, Reed assessed how online interactions with nature (e.g. YouTube, Minecraft, TikTok) foregrounded how young people in urban areas of multiple deprivation connect to nature. It was found that these online spaces not only foregrounded a sense of connectedness, but also informed young people's normative interactions with the natural world. All too often, young people's online interactions are met with scepticism and criticality, it may be that greater attention needs to be placed on the creation of nature connectedness in virtual worlds to fully understand the relationships between people and nature in this time of climate and ecological

crises.

In the remote-working arena, Bosworth identified a trend where coworking spaces are increasingly seen as spaces for digitally skilled workers to access social connections, rather than spaces where digitally-disconnected people can access better technology. As a result, the minority of rural workers who continue to lack digital skills may become further isolated by the acceleration of digital working and visible spaces that cater for this "other", new section of the rural workforce. Some coworking spaces were providing training and networking opportunities to increase accessibility, encouraging a wider range of remote workers and freelancers to connect and explore the potential for more digitally-enabled ways of working. This inclusive approach is not only important for engaging potential users, but it can also bridge some of the social and cultural divides that are emerging as a result of new ways of working, particularly in rural communities.

In each of the three cases above, there is a sense that emerging "hyperconnectivity" is increasingly compartmentalised within certain societal or professional groups. Older people connected to friends, family and services; remote workers and free-lancers connected to other members of the digital society; or young people connected to virtual spaces that always seek to define and shape culture and broader interactions with the physical world.

However, the final paper on farmers (Townsend) presented a different picture of the opportunities that hyperconnectivity can offer for those working in peripheral areas. Farming is increasingly peripheral in a cultural sense, as our connections to food production systems are sterilised through supermarkets and online retailing. Yet increasingly, digital technologies allow farmers to tell their stories in new and engaging ways. As farmers seek to diversify their income streams, the scope to build communities and connect with followers on Facebook, Instagram or Tik-Tok from anywhere in the world presents new channels for communicating their "real" worlds through these virtual spaces. Farmers now have ownership of their identities, where they can choose to portray the idyllic locations, the care that they afford to the environment and the animals under their stewardship, or the hard realities of farming life. This empowerment can be used to drive consumers towards new agri-tourism activities, to highlight the quality of their products with the intention of attracting a premium price or simply to help them to have a voice in the face of perceived political neglect and growing

environmental antagonism towards farmers. However, here we again see the effects of skills-based digital divides. Those farmers with the most influence on online platforms are those with the largest following – something dictated in part by the length of time they have been using the platform(s), and in part by their respective skills in digital and visual storytelling. This affords advantages to those farmers with the "knack" for creating attractive content and growing audiences on social media platforms.

Hyperconnectivity is a defining 21st century phenomenon. In one way or another, we are all reliant on our digital infrastructures for work, leisure, and socialising. The ways in which hyperconnectivity interacts with rural spaces is often overlooked in literature and in policy, especially in relation to place-attachment, heritage, and localism. This raises significant implications for rural futures, where uniqueness in geographies, demographics, and opportunities construct novel arenas for digital technologies and infrastructures to affect and impact communities and local economies. Our session at the Regional Studies Association Annual Conference brought this into sharp focus, calling for greater attention on how areas such as artificial intelligence, social media, and remote working define our realities, including how these developments include, exclude, and overlook rural environments. Whilst the literature over more than a decade has thoroughly documented the effects of urban-rural digital divides, hyperconnectivity highlights the more subtle inequalities that exist not only between, but also within particular social groups, economic sectors and rural places. It is crucial that the next generation of rural digitalisation research pays close attention to these unfolding dynamics, as people and places become ever more hyperconnected in an increasingly digitalised world.

References

Bauer, J. M. (2018). The Internet and income inequality: Socio-economic challenges in a hyperconnected society. *Telecommunications Policy*, 42(4), 333-343.

Candiotto, L. (2022). Extended loneliness. When hyperconnectivity makes us feel alone. *Ethics and Information Technology,* 24(4), 47.

Rijswijk, K., Klerkx, L., Bacco, M., Bartolini, F., Bulten, E., Debruyne, L., … &

Brunori, G. (2021). Digital transformation of agriculture and rural areas: A socio-cyber-physical system framework to support responsibilisation. *Journal of Rural Studies,* 85, 79-90.