Conference or Workshop Item:

Disentangling value in a co-creating Organisation: exploring the tensions between paid professionals and users, Scientist and citizen scientists

This paper explores important questions about the production of value(s), ownership, and the dynamics of social interactions associated with acts of co-creation. The answers provided are considered specifically from the viewpoint of the user and therefore form a new contribution to the theoretical understanding of crowdsourcing in practice. In doing so, this paper seeks to move beyond abstracted notions of the crowd, interrogating the processes and interrelations that take place within heterogeneous groups of users.

By examining the relationship between paid labour and users within the 'Zooniverse', a citizen science crowdsourcing platform, we illustrate the significance of user activities as they relate to the collective categorisation of large datasets, mainly relating to images that cannot currently be analysed algorithmically. Originally the Zooniverse's crowdsourcing platform was established by a small group of academics for a single astronomy project, but it has since grown into a multi-project platform that has engaged over 1.3 million users. The substantial growth in user involvement has initiated specific technological innovations and adaptations, but more importantly for this study, it has also given rise to different social dynamics within the platform.

The Zooniverse has had to adapt to incorporate greater numbers of users, scientists, and software developers as it has grown. This has entailed the expansion of a competing set of demands within organisation, as well as beyond its boundaries. For example, as new links have been forged with other organisations, each brings definitions of success from different disciplinary backgrounds and measures research outputs in varying ways. This is particularly important for funding bodies – both directly academic related, but also those relating to outreach and software development – seeking justification for how different grants have been used and assessing new or prospective bids. These different demands need to be actively managed and balanced in order to maximize the analytical potential of the large body of people.

In the Zooniverse projects, unlike microwork platforms, the user engagement moves beyond the immediate task at hand. For example, with Amazon Mechanical Turk, tasks are broken down into small parts with the crowd completing them separately from each other. The communication is entirely vertical, and often in a single direction towards users. There is no opportunity for horizontal communication between users or the opportunity to build a community, independently or otherwise. Users on the Zooniverse are able to discuss images (the smaller parts of the overall project) and identify anomalies or other larger trends. There have been a number of instances in which individuals users have made major findings and been credited on peer-reviewed academic publications. This democratising potential of citizen science allows users who want to be involved in scientific discovery – or perhaps have been in the past – the opportunity to do so. This creates tensions between the professional scientists who have launched the project with specific aims on the Zooniverse and the users who may have alternative ideas about how the data can be used. For some users this can involve subverting the images for other uses, for example, taking part in gamified activities. While for others it can manifest in a struggle over access to data and the right to follow up particular aspects. These emergent practices constitute a form of resistance, which in

some cases is the result of divergent criteria for valuation within the platform, or in other cases results in contestation of what is valued and why.

The paper draws on empirical data from an ongoing research project that has access to both the users and paid professionals on the platform. Using a combination of ethnography, in-depth interviews, and quantitative data new insights into the organisation and its processes can be provided. This living lab provides an interesting starting point for understanding the dynamics of value creation associated with organizing and driving a co-creation process. While it would be possible to value the labour inputs on the platform, or work out the value of the funding associated with it, this would fail to uncover the potential value co-created in the process of crowdsourced citizen science. The rupture between economic and other forms of value is a pertinent question to address both within academia and in broader society, particularly as more esoteric values increasingly become submerged under neoliberal measurements and metrics.

We therefore presents a cross section of qualitative data including testimonials, interview transcriptions and diary excerpts to highlight the existing tensions in co-creation practice. The Zooniverse case study is explored in depth to highlight the processes of co-creation that take place on a digitally enabled crowdsourcing platform. In particular the tensions associated with whose value and for whose benefit that exists between paid and unpaid work in the context of peer production. The blurring of the organisational boundaries and the separation between work and play makes this a particularly important site for understanding new or emergent dynamics in this context.

We argue that the growing peer-to-peer capacity of this organization has blurred the boundaries between professional and citizen scientists and that this has been necessary so that the value created through crowdsourcing science data analysis can be captured and accommodate the complexity associated with the tasks involved. Furthermore that not all value can or will be captured in the co-creation process activities between organisation and user.