

Introduction to Collective Intelligence and Crowds

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Internet platforms allow people to aggregate knowledge from socially distant areas. They also allow diverse groups of people, and maybe machines in the form of artificial intelligences, to negotiate identities. With these socio-technical configurations we can build collective intelligences that will steer the quest for knowledge. These collectives can be self-catalyzing, deciding individually or collaboratively what to do next, out of which novel and practical ideas emerge. While these open design collectives rely on organic growth, alternative structures based on crowds can be assembled more rapidly. Between the two extremes are a host of different organizational and social structures, in which committed members of a community create, improve, and share ideas. The output of these socio-technical systems often takes the form of digital media, and their traces are varied, ranging from ephemeral short messages to curated collaborative knowledge repositories.

The collective intelligence minitrack includes analysis of crowdsourcing and collective intelligence. As the assemblages of people and machines are making new forms of organization possible, research that explores these new forms of organization is much needed. Its scope includes the analysis of collective intelligence, new sociotechnical configuration of knowledge creation, and crowdsourcing, as well as the analysis of social interaction as a way of describing underlying social structure. This year, we have three papers in our minitrack.

In the first paper, *Mapping Accessible Paths in the City Using Collective Intelligence*, Valmir Luiz Marques and Alexandre R Graeml, describes a study that is based on an application that was designed to use collective intelligence to help people with reduced mobility. In their abstract they claim: "New information and communication technologies (ICTs) have an increasingly stronger role in people's lives, especially after the commoditization of smartphones. They affect many aspects of everyday life, including urban mobility. Many of the services that these technologies enable benefit from the collective intelligence (CI) of citizens. But how many of these services are designed to help the urban mobility of

people with reduced mobility, for whom it is a challenge move around the sidewalks of our cities? With the intention address this issue, we developed an application prototype using CI techniques, for people to feed and update collaborative maps, tagging obstacles, but also indicating the existence of resources that contribute to the mobility of people with special needs in urban spaces. Tests in a controlled environment helped including the basic functionality to the application, which is now ready to be tested by those for whom it was primarily designed."

In the second paper, *Crowdsourcing for Value Innovation*, Teresa Cristina Monteiro Martins, and her colleagues, "aim to relate the theories of the "Blue Ocean" and "Wisdom of the crowds" to answer: "Can crowdsourcing contribute to the generation of innovation of value?". For this purpose, information on the four businesses used by Howe (2006) to propose the term crowdsourcing: iStockphoto, Web Junk 20, InnoCentive and Amazon Mechanical Turk - AMT was searched in literature and internet. For each business, [they] identified the characteristics that allow [the authors] to identify them as crowdsourcing nowadays. In this first analysis, it was concluded that, currently, the Web Junk 2J0 would not be classified as crowdsourcing. In a second analysis, [they searched] for the attributes of these businesses capable of generating innovation of value. It was concluded that iStockphoto, Innocentive and AMT have common features that generate value innovation and can be grouped into the Reduce, Eliminate, Rise and Create matrix, according to the "Blue Ocean."

In the third paper, *It is Not All Fun and Games: Breaking News Consumption on Snapchat*, Tom Wilson and his colleagues try to understand, using the Network Gatekeeping lens, how Sanpchat users use the platform for consumptions of news during the 2016 election, through 19 interviews. In their abstract they claim: "Snapchat is a camera and ephemeral messaging application popular among young adults. Due to its self-destructing content and playful features, Snapchat is often associated with more trivial uses. However, the platform has added functionality to support consumption of news. To

understand how users perceive and interact with news content on Snapchat, we conducted semi-structured interviews with 19 users of the platform, focusing on their use of Snapchat during breaking news events, including the 2016/2017 US presidential election and inauguration. Through the lens of Network Gatekeeping, our research explains how users consume breaking news content on Snapchat. We unpack users' ambiguous perceptions of news reliability on Snapchat, and demonstrate how this contrasts with traditional news consumption. Our research also describes how users' mental models of how Snapchat works—specifically their theories about how the platform curates news content—shape their judgments of reliability, media bias and authenticity.”

The three papers provide useful and timely analysis of collective intelligence utilization for empowering people with reduced mobility, crowdsourcing for business innovation, and new sociotechnical configuration of knowledge creation, dissemination and use.