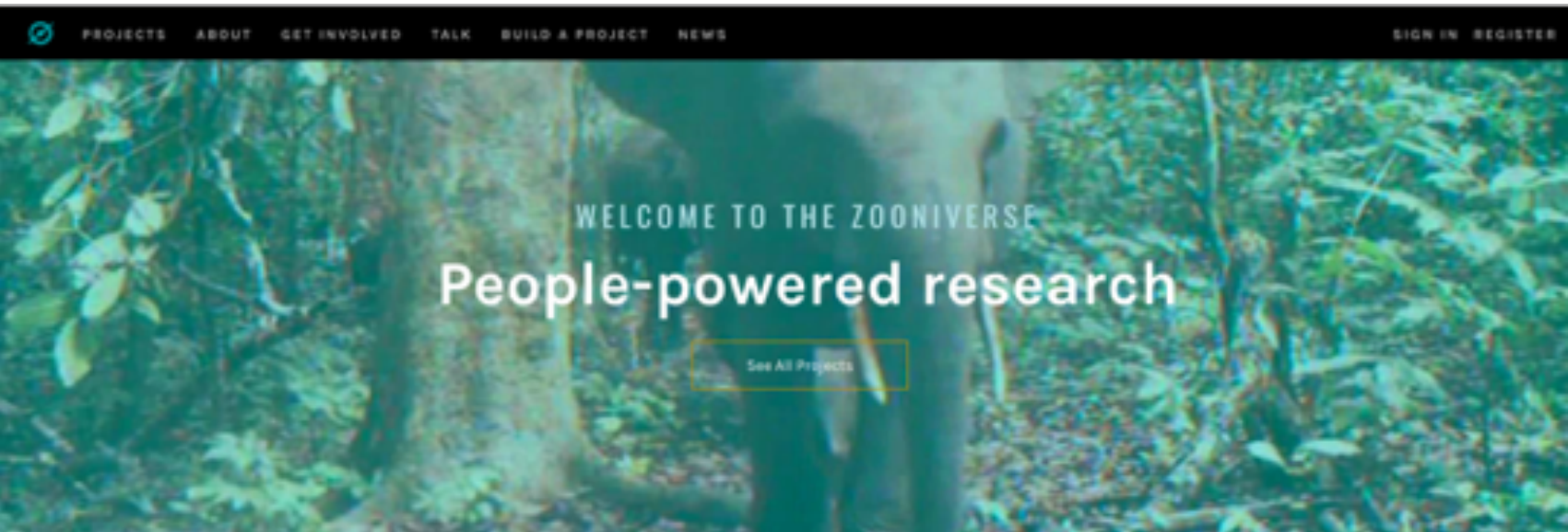
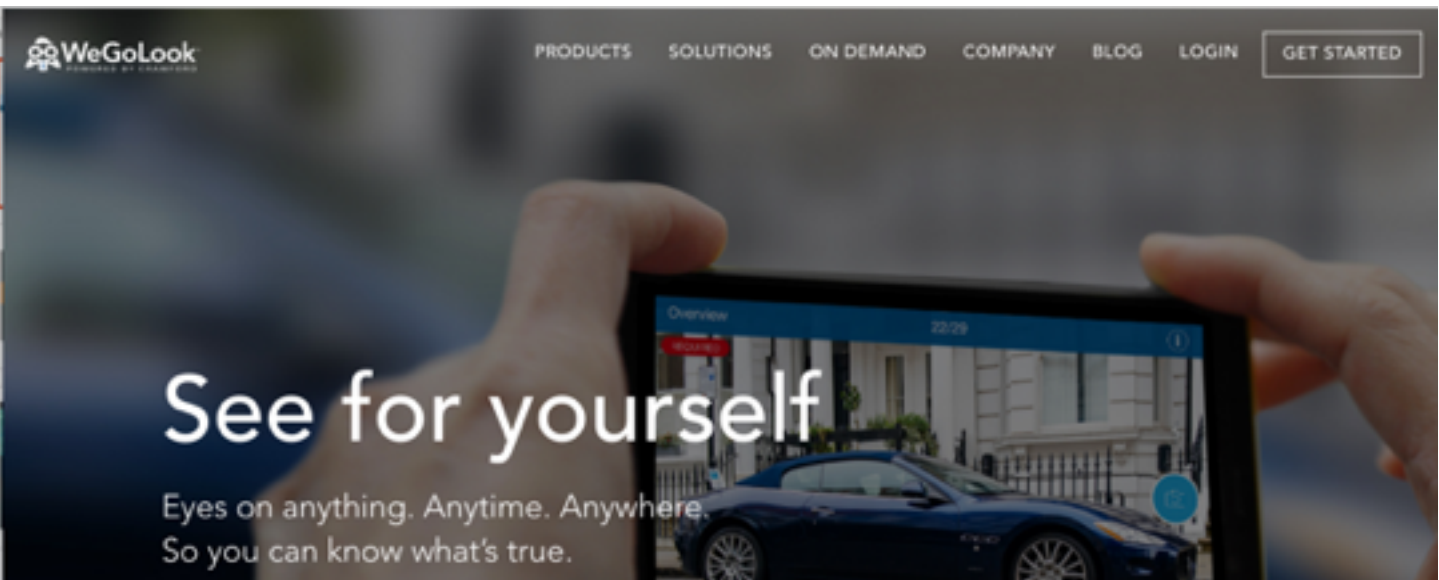
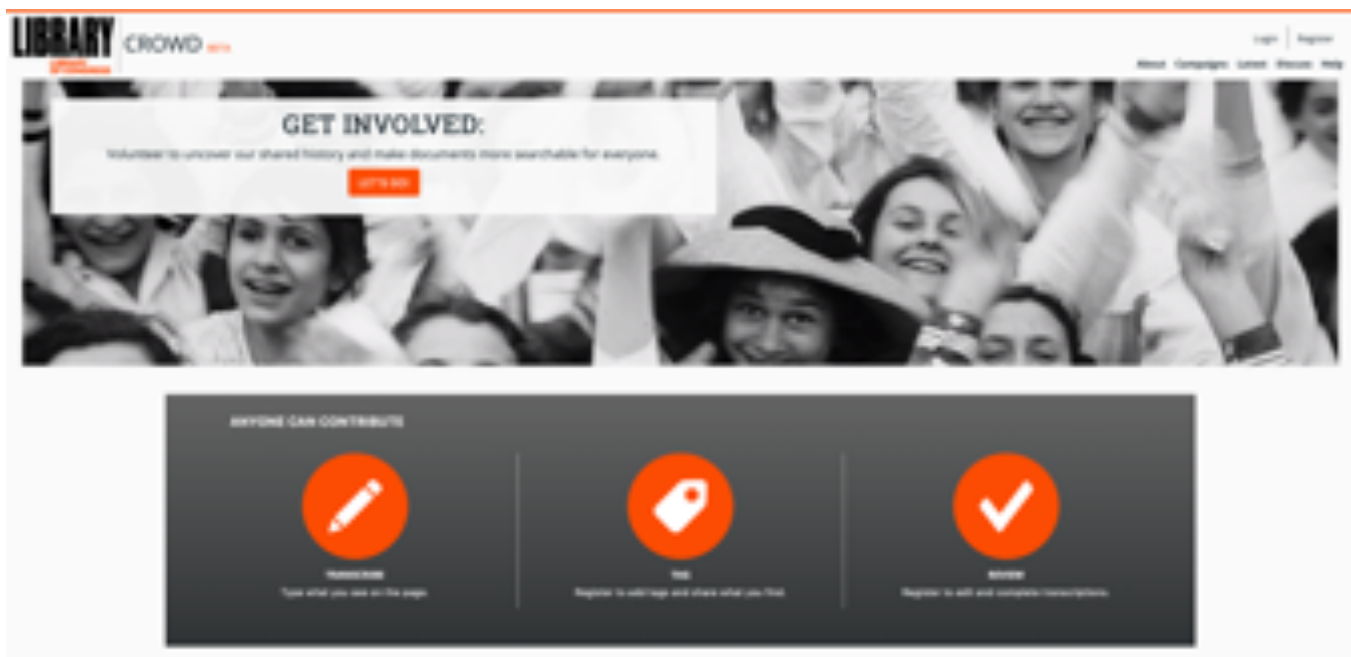
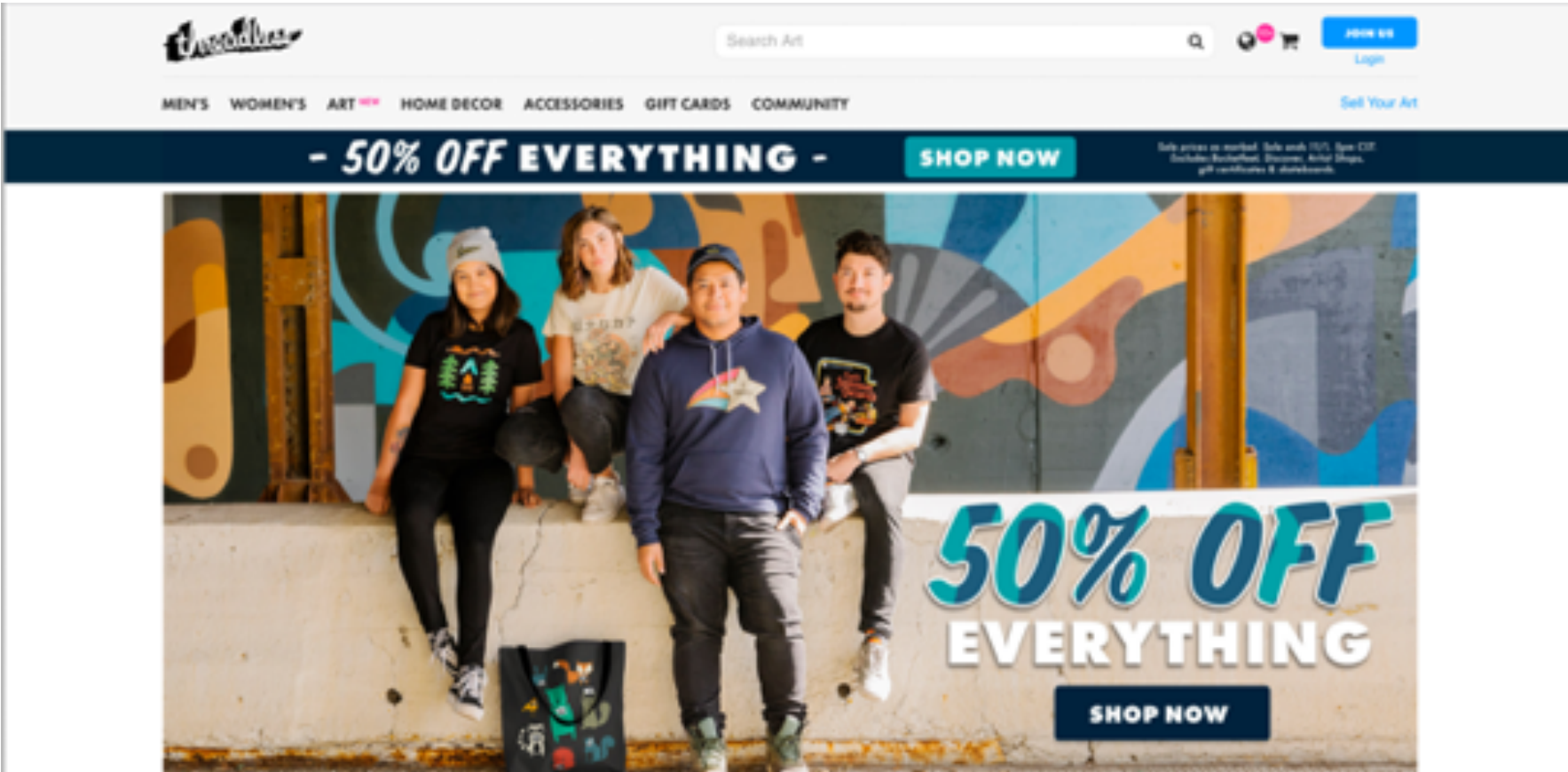


Crowdsourcing as Epistemic Landscape

Crowdsourcing

- *“Crowdsourcing is a type of participative online activity in which an individual, an institution, a non-profit organization, or company proposes to a group of individuals of varying knowledge, heterogeneity, and number, via a flexible open call, the voluntary undertaking of a task.”* (Estéelles-Arolas & González-Ladrón-de-Guevara, 2012)
- Crowdsourcing as a collective phenomenon is “ordinarily understood” (Gilbert, 2004) as a way to **catalyse beliefs** from **different agents** and obtain one or more **selected ideas** as a **solution to a problem** (implicitly, “truth”).
- Overall those are considered as the output of the “**collective intelligence**” (Malone & Bernstein, 2015) made up by the crowd.

...a way to **involve collective agents** such as communities, masses, or groups in **problem solving, ideas generation, deliberation, production** (Afuah & Tucci, 2012; Aitamurto & Landemore, 2016).



Motivations

Crowdsourcing and collective epistemology

- A. Crowdsourcing has not yet received an extensive problematization under a perspective of collective epistemology (Gilbert, 2004; Lackey, 2014), especially with regard to his **characteristics** and **epistemic activities** making up and impacting its **epistemic outcomes**,
- often **taken from granted** by the organisations or individual **promoting crowdsourcing** activities
 - considered as **the result of the collective action** (thus, implicitly adopting a “non-summativist” approach)
 - although being in some case interested to the different **contribution by the individuals not necessarily expression of the “winning” solution** (thus, implicitly adopting a “summativist” approach).
- B. Crowdsourcing makes difficult to **exhaustively apply the concepts of “group” or “collective”** as the basic subject of agency in social and collective epistemology (Lackey, 2014; List, 2005; Tollefsen, 2015), with consequent **problematization of the unit of analysis** carrying out the **final belief** and how they eventually **joint commit to the belief** (Bird, 2014).

Motivations

Crowdsourcing and social epistemology

Crowdsourcing could also potentially benefit from existing work in social epistemology on

- **problem solving** (Hong & Page, 2001, 2004; Page, 2007)
- modelling of **epistemic communities** in science and the **division of cognitive labour** (Grim et al., 2019; Weisberg & Muldoon, 2009).

Background

- Consider what have been identified in previous work in management and innovation studies as **characteristics of crowdsourcing** (Afuah & Tucci, 2012; K. Boudreau, Gaule, Lakhani, Riedl, & Woolley, 2014; K. J. Boudreau, Guinan, Lakhani, & Riedl, 2016; Majchrzak & Malhotra, 2016; Viscusi & Tucci, 2018),
- **Problematize them** against some themes of social epistemology, especially the **division of cognitive labour** and the **role of diversity** (Hong & Page, 2004; Kitcher, 1990).
- **Position crowdsourcing** as a subject of research for the field of **collective epistemology** (Gilbert, 2004; Lackey, 2014) that has already problematized crowd-driven initiatives such as, e.g., Wikipedia (Fallis, 2009; Tollefsen, 2009).

Research questions

Thus, considering **crowdsourcing as an epistemic landscape** leads to question

- *how its **characteristics** contribute to its **configuration** as well as to its **epistemic outcomes**?*
- *how the **pervasiveness of problem solving** (Afuah & Tucci, 2012), the different **forms of organizing**, the **seriality of actions** (Sartre, 1960) and the **self-selection of members** impact on **cognitive diversity** and eventually to the **epistemic performance** of crowdsourcing (Pöyhönen, 2017).*

Agents dynamics in crowdsourcing

- The **number of participants** is a sufficient, but not necessary condition for crowdsourcing (Viscusi and Tucci, 2018).
- Different types of **crowd dynamics** according to **growth tendency**, degree of **seriality** and the intervening role of properties such as, e.g., **density**, **equality**, and **goal orientation** (Viscusi and Tucci, 2018).
- Those characteristics distinguish the distribution of agents within and between the **different types of digital“crowds”**.

Agents dynamics in crowdsourcing

Groups

Let's now consider groups as the basic unit from which other types of digital crowds may arise.

- A group can be defined as a “self-consciously, mutually acknowledging collective with a self-conscious purpose” (Young, 1994).
- A group as a **crowd crystal** (Canetti, 1962) may grow in an unrestricted fashion, losing the seriality nature of the crowd, becoming no longer anonymous, and finally reaching a “community” status.

Agents dynamics in crowdsourcing

Online communities

- **Online communities** are a well-known topic for both practitioners and academics (West & Lakhani, 2008).
- A community is “a group of people who trust each other. **Trust**, in turn, is confidence that other people will act, in the future, in ways we think are right...that they have a generalized disposition to do the right thing ” (Heckscher, 2015, pp. 6–7).
- The role of **identity and beliefs** in the community’s **cohesiveness** are relevant, rendering them difficult when there are conflicting and heterogeneous goals.
- It is worth noting that **online communities smooth these characteristics** (Faraj, Jarvenpaa, & Majchrzak, 2011).

Agents dynamics in crowdsourcing

Digital (closed | open) crowds

- A group can also evolve towards either closed (controlled by intermediaries, such as, e.g., Innocentive) or open crowd types (such as e.g., Twitter users).
- Those types require a stronger, specific **goal orientation** as well as **information capacity** (Batini, Castelli, Viscusi, Cappiello, & Francalanci, 2018), especially for open crowds, which can be considered actual multitudes.

Agents dynamics in crowdsourcing

Multitude

- A “**multitude**” can be defined as “a social body in which singularities are not required to shed their differences in order to form a common notion” (Tampio, 2009, p. 387) or as a “ ‘plane of singularities,’ an open set of relations neither homogeneous or identical with itself, bearing indistinct and inclusive relation to those outside of it” (Hardt & Negri, 2000, p. 103).
- When considered as a type of multitude, **open crowds** can be seen as as **key force of production** (Virno, 2004), combining **technological expertise** and **general social knowledge** in a **cognitive-cultural economy** (see also Vercellone, 2007).

Conclusion

The exposed arguments represent a preliminary background for

- motivating the study within **collective epistemology** of **crowdsourcing** as a particular **collective cognitive state**
- questioning his **characteristics** and **epistemic activities** making up an **epistemic landscape** as well as impacting its **epistemic outcomes**.

Thank you for your attention

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