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Why sociological theory matters in the age of algorithms: considerations on Ori Schwarz's *Sociological Theory for Digital Society* (Polity, 2021).

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Sociological theory is often perceived as the semi-obsolete heritage of 19th and 20th century thinkers: good enough to make sense of power, social structure and face-to-face interactions, but substantially inadequate to interpret the now overwhelming technological mediation of social life. Perhaps for this reason, the social sciences see a proliferation of midrange theories of “the digital” following the hype around the technological trend of the moment – e.g., AI, crypto, blockchain, metaverse. “New technologies reshape society; therefore, brand new concepts and theorizations are needed to make sense of it” appears to be the doxa guiding recent scholarship. Yet, is this always true? Does a digital society necessarily require “digitally native” social theories?

For instance: do streaming platforms democratize and personalize cultural consumption to the point that Bourdieusian logics of distinction vanish? Or, does the algorithmic circulation of information on social media entirely disrupt pre-digital public opinion processes? While several papers have eloquently put forward these two “digitally native” hypotheses, empirical examinations usually offer far more complex and multifaceted pictures (see Airoldi 2022; Bruns 2019), and the same is likely to be the case for any research field equally transformed by digitalization and automation. This, because technological innovations can never *determine* societal change alone: they are necessarily embedded in the societies they contribute to modifying, in a dialectical relationship of mutual shaping (Mackenzie and Wajcman 1999). Algorithms and cryptocurrencies, apps and platforms are all products of a “sedimentation” of society (Sterne 2003), ultimately of the very same societies that classical and contemporary social theorists reflected upon. Thus, sociology's theoretical tradition can still be relevant in the digital age, especially after a little tuning.

Ori Schwarz's *Sociological Theory for Digital Society* (Polity, 2021) comes in handy here. The book proposes to rethink sociological theory in light of the digital reshaping of society. Schwarz is certainly not the first to address this ambitious goal (see, for instance, Orton-Johnson and Prior 2013; Marres 2017), but he is probably one of the firsts to do so without drawing boundaries

between “regular” and “digital” sociologies. The latter adjective looks quite superfluous indeed: it has been evident for some time that “the social order is not a social order at all. Rather it is a sociotechnical order. What appears to be social is partly technical. What we usually call technical is partly social” (Law 1990:10).

Sociological Theory for Digital Society asks how the renegotiation of the rules, practice and ontology of social life brought about by the diffusion of digital technologies challenges classical sociological theory. To what extent do the assumptions of symbolic interactionism hold with the context collapse brought about by digital social situations (Chap 2)? How do social network theories relate to social network sites (Chap 3)? In what ways do platforms and digitalization transform social capital (Chap 4)? What happens to power in the age of algorithmic systems and surveillance capitalism (Chap 5)? How do work and labour change in the digital economy? (Chap 6).

Below I outline the main contributions of Schwarz's book. Then, in the concluding section, I will briefly sketch further directions for reaffirming the centrality of sociological theory as an essential interpretive toolkit for understanding today's (techno-)social realities.

Beyond situations?

The first strand of sociological theory discussed by Schwarz is symbolic interactionism. Everyday social interactions are reshaped by the ubiquitous use of digital media, which ordinarily “augment” face-to-face social situations (Jurgenson 2012), producing the simultaneous juxtaposition of multiple synchronous and asynchronous communicative layers, online and offline. What does this technological shift entail for the ideas put forward by Mead, Blumer, Goffman and others? According to Schwarz, while the interactionist view of an agentic and interacting subject is not necessarily put into question by digitalization, social situations are – to the point that the digital makes “the interactionist object of research melt into air” (p. 9). This happens for three main reasons: a) purely face-to-face interactions have become the exception rather than the rule; b) as a result, “social reality is no longer structured as a linear sequence of situations”, and interactions “dissolve into fragments in time and space” (ibid.); and c) last, differently from face-to-face communications, digitally mediated ones are “self-documenting”, since they produce “documentary data objects” that ultimately blur the distinction between events and objects.

While the first two points are not new (see, for instance, Knorr-Cetina 2009; boyd 2008; Meyrowitz 1986), Schwarz's thesis that digital social situations are events *and* data objects at once is

fascinating: it allows us to refine the sociological explanation of platformized social interactions. The key idea here is that, differently from “pure” face-to-face communications, digitally mediated ones always generate data, which are automatically stored and processed by platforms and, occasionally, by users themselves – e.g., when taking screenshots of posts and chats. Therefore, digital interactions are simultaneously “an exchange of symbolic gestures among interactants (which interactionists are used to analysing) and the collective production of a durable object: the log, the documentation of the interaction” (p. 23). Unlike walls, settings, and costumes in Goffman’s dramaturgical account of social life, the objects resulting from the digital mediation of a social situation – say, a WhatsApp conversation – are almost indistinguishable from the social situation itself. These data objects are durable, allow for novel forms of surveillance, and can be easily taken out of context – as the many cases of revenge porn sadly witness (see p. 33). This “interaction-object duality” (as the author calls it) has non-negligible effects on the temporality of social situations as well as on the behaviour of participants, “who are influenced by the risks and opportunities brought by the data objects they co-produce during interaction and by their value (including their exchange value)” (p. 10).

Schwarz here has the merit to develop and integrate in an interactionist framework Danah Boyd’s early ideas on the persistence, scalability, searchability and replicability of online communications (2008). The chapter concludes by stressing the need for a “post-situational interactionism”, capable of navigating the uncertainty of interactions which can no longer be bracketed a priori. When studying a digital social situation, researchers must instead “follow the attempts of actors [...] to bracket it, to negotiate this bracketing and to break its boundaries” (p. 46).

Material networks, objectified social capital

Chapter 3 deals with the powerful idea of network, arguing that, from being a successful metaphor of the unfolding of social and economic life, networks have turned into “material infrastructures” and “performative data objects”, with important implications for social ontology and sociological thinking. While the network models developed in SNA (e.g. Granovetter 1973), the theorizations of actor-network theory (Latour 2005), and Castells’ influential idea of a “network society” (1996) all employ the concept of network essentially to *represent* the relational ontology of the world, social media *materialize* it and – by doing so – end up *transforming* it. The architectures of nodes and edges social scientists build to model and visualize social patterns are now somehow “alive”, embedded in the technical infrastructures of platforms and constantly animated by flows of real-

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time data – such as those allowing Google to automatically hierarchize web pages, or Tinder to propose personalised selections of potential partners. However, as Schwarz rightly notes, it would be naïve to see Facebook's graph simply as a manifestation of one's actual friendship network, or LinkedIn as a neutral map of one's professional contacts: in fact, digital networks are also *performative data objects*, co-produced by algorithmic systems suggesting new friends to add and new content to like. A bit like financial markets, whose trends and oscillations are ultimately determined by the very “devices” built to measure them (Muniesa et al. 2007), social networks are redefined by the platforms materializing them. Schwarz conceptualizes the new forms of social association emerging from the platformization of social ties as “connective”, building on recent research on connective action (e.g. Bennett and Segerberg 2013) and memory (Hoskins 2009). Differently from the “collective”, the connective is constituted of ephemeral publics whose composition and fluctuations reflect sociotechnical platform dynamics rather than the shared social identities familiar to sociologists. Resulting from the algorithmic management of data flows, connective sociality is (at least partly) the computational product of nonhuman agents. This shakes once more the fragile anthropocentric grounds of classical sociological theory (Latour 2005; Law 1990; Airoldi 2022).

Chapter 4 then shows how the digital materialization and connective rearrangement of social networks described above also affect the ways in which ties are used as resources, thus challenging Bourdieu's theorization of social capital (1986). Consisting of relationships, group affiliations and contacts that can be mobilized by social actors within fields, social capital does not exist in an “objectified state” – differently from economic capital and cultural capital, which regularly do so (e.g. as money and books, respectively). Yet, according to Schwarz, social network sites objectify social capital, “making its accumulation and maintenance much easier” (p. 95). Digital quantifications of “followers” and “friends” qualitatively change the status of Bourdieusian social capital, making it a “meta-capital”, a generalized resource spendable across fields, with platforms acting as banks. The book illustrates this point through several examples regarding the fields of journalism, activism, marketing and professional politics. Yet, it remains not entirely clear how this new “generalized social capital” boosted by digitalization relates to other forms of capital within the Bourdieusian theoretical framework.

Power and labour in the platform age

Finally, chapters 5 and 6 focus on two canonical subjects of sociological theory: power and labour. Regarding the first, Schwarz remarks the necessity to “take the material world more seriously if we want to account for the role of digital systems and algorithms in our theorization of power” (p. 117). On the one hand, the algorithmic systems governing contemporary societies “challenge the very distinction between potentiality and actuality and thus make it much more difficult to claim that power does not exist as a potentiality between its moments of actualization” (p. 116). Differently from the abstract rules of modern bureaucracy described by Weber, algorithms work according to “generative rules” (Lash 2007) which are immediately actualized. Such rules constitute reality by computationally sorting it – e.g., by denying a credit card transaction as soon as it is classified as atypical (p. 131). This complicates a long theoretical debate – meticulously reconstructed by Schwarz – on whether “power exists only when it is put into action”(Foucault 1982: 788), or not. On the other hand, algorithms are conscienceless, and so is their power. Building on Zuboff (2019), the author argues that algorithmic power does not require any freedom of choice, knowledge, or legitimization on the part of the ruled, in contrast with Foucauldian and Weberian theories. Nonetheless, it can be argued that techno-optimistic discourses on the objectivity and effectiveness of automated decision making do contribute to legitimizing algorithmic predictions and classifications (Airoldi 2022: 78-9).

The book goes on to discuss how digitalization affects theories of labour and work. Chapter 6 critically puts Marx and post-Marxian thinkers in conversation with the recent literature on digital labour (often of Marxian inspiration), which examines the novel forms of “workless labour” (p. 179) enabled by platforms and digital technologies more in general. While waged workers see digitalization eroding the boundary between life and work, platform consumers become producers – of content, value, as well as data for advertising and AI training. Hence, consumers are somehow workers, even without realizing it, and this changes the status of what sociologists call labour. Schwarz here offers an original account of the multifaceted consequences of digital technologies on work and labour, by carefully disentangling the two notions. What is missing in this (already very rich) chapter is probably a focus on work automation and the algorithmic control of workers (Delfanti 2021; Kellogg et al. 2020), which are important aspects of the “increased governability” (p. 123) characterizing digital societies.

Sociological theory still matters

Sociological Theory for Digital Society represents a major step toward a much-needed rejuvenation of sociological theory in light of digitalization and datafication processes. The book is complex and a bit tortuous at times, but that is a side effect of the many topics and vast literature covered by it, ranging from distant sociological traditions to recent scholarship on the digital. However, this work offers more than an up-to-date literature review: the thorough examination of the objectifying power of data and digital infrastructures, as well as informed call for a less anthropocentric sociological imagination, represent significant and original contributions.

On a less positive note, the reader might have the impression that the challenges digitalization presents to sociological theory are often slightly exaggerated in the book. For instance, regarding the need for a “post-situational” interactionism, several contributions show how users ordinarily manage to successfully delimit and navigate digital social situations by relying on platform “affordances” (see Rama 2022), as also occurred before in the case of “electronic media” (Meyrowitz 1986). Having said that, the book has the great merit of providing a new, fertile ground for problematizing and reimagining the assumptions of sociological theory across a wide range of topics.

Of course, some fundamental questions remain unanswered. An example, linked to my own research, is how machine learning and AI models take part to (and, therefore, transform) processes of socio-cultural reproduction (Airoldi 2022). While Schwarz correctly acknowledges that, in contrast to material artefacts (for instance, the famous Latourian door closer), what is delegated to algorithms “is not the realization of the decision but deliberation and decision-making itself” (p. 119). In the case of machine learning systems we can go even further: in fact, what is delegated to intelligent machines is the very power of making and adjusting the (generative) rules, based on data examples extracted from users’ online activities. This inductive logic, characterising current AI applications, explains several episodes of algorithmic bias that have made the news – e.g. the case of Microsoft’s chatbot “Tay”, which became racist and sexist by learning how to tweet from Twitter users’ replies. Furthermore, it complicates sociological understandings of agency – not necessarily in ANT’s way (see Airoldi 2022) – as well as social structure – potentially reshaped by the entanglement of human and machine learning (Fourcade and Johns 2020). In the age of algorithms, society is “recursive” (Beer in press) - that is, built upon “multiple feedback loops, each endlessly feeding into the next” as “data are produced by an action they then feed into future actions, repeatedly”. The opaque interactions we regularly have online with machine learning systems –

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such as those recommending products and social media content, ranking news by relevance, generating brand new texts and images, screening and sorting resumes, etc. - ultimately iterate a social order made of power inequalities, symbolic boundaries, hegemonic cultural representations and subtle discriminations (Noble 2018; Airoldi 2022). Esposito (2017) goes so far to argue that, despite a different way of reasoning and the absence of sentience, learning algorithms can be seen as “social agents”. If the making of society has become a more-than-human process, where does that leave classical sociological theory?

I believe that the renegotiation of the boundaries of “the social” (Law 1990) fostered by the rampant platformization and automation of human culture represents an opportunity for sociological theory, rather than a threat. When reading the recent computer science literature on “machine behaviour” (e.g. Rahwan et al. 2019), for instance, it becomes apparent that the questions researchers are now asking about AI are essentially the same as those that obsessed 19th and 20th century sociologists, only with algorithms instead of humans as protagonists. The problem is that the debate on the social implications of machine learning is currently monopolised by technologists who admittedly know nothing about sociological theory (Rahwan et al. 2019:478), and thus tend to remove cultural and social dynamics from the big picture. Sociologists must step in to offer critical interpretations of our complex techno-social world, building on Bourdieu (Airoldi 2022), Luhmann (Esposito 2017), or the other theoretical traditions revisited by Schwarz in his essential book. Sociological theory still matters. Not in a museal fashion – as the sacred, untouchable relic of a glorious intellectual past – but as a malleable “thought matter” that can be updated, extended, improved, and revised, in order to serve as ground for a novel sociological imagination, better suited to the age of algorithms and platforms.

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