Algoritmi, Strutture e Agire Sociale

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Algorithms are pervasive entities in the structuring of contemporary social life. From unlocking one's phone, to perform financial transactions through platforms, up to the reliance on software to predict one's likelihood to commit crimes, algorithms dominate the ways in which daily tasks are performed and have important social impacts that must be considered. But what does it exactly mean to live through them? It means to experience the world not merely with algorithmic assistance or under algorithmic governance, but rather to have our own ways of interaction, existence, and perception mediated and structured through algorithmic processes. Algorithms can shape what can be known, how it is experienced, and who we become. For example, dating apps do not simply facilitate romantic encounters but they restructure the horizon of romantic possibilities; users' intimate needs become algorithmically curated and dependent. In recent years, algorithms have not only infiltrated the fabric of social life, raising urgent questions about authority, agency, and structure, but they also shape the possibilities of action and performance in daily contexts. Everyday social action is entangled in socio-technical architectures that oversee the boundaries and opportunities of self-representation, performance, and practices. For example, consider the construction and presentation of oneself on social media, or the reliance on software (such as Microsoft Teams, Excel, ChatGPT) for professional settings. In these and other cases, algorithms dominate how society functions. Thinking through the ordinariness of algorithms unlocks a series of interrogatives regarding their nature, functions, and power. Individuals are embedded in a system of constant surveillance that affords them possibilities (and constraints) of self-expression, while manipulating their perception of reality.

In sum, algorithms have social consequences, and Riccardo Pronzato's book offers important insights and tools to better understand them. The topics addressed by the book are of extreme social relevance, not only to further the understanding of algorithmic architectures, but also to decipher the forms of social power they enact. The author does so by investigating the ramification of algorithmic action on regular users such as university students and medical experts. The nature of algorithms has long been a subject of scholarly debate, with broad consensus around their inherently multiple and heterogeneous nature (Bucher 2018); subsequent scholarship has further examined their entanglement with social, cultural, and

economic structures, analysing how they mediate visibility, representation, and inequality in everyday life (Noble 2018; Aiello and Parry 2020). Due to their heterogeneity, algorithms can perform across different contexts – from education to the legal and medical fields etc. – while also retaining their dominance in mediating and structuring experiences. Within this multiplicity, there is a dialectical relation between agency and structure that allows individuals to appropriate and manipulate algorithmic constraints. Algorithmic agency can be deciphered as the ways in which algorithms can authorise, allow, encourage, influence, suggest, block, and prohibit users' experiences on digital platforms; whereas user agency is understood as the individuals' freedom to shape their reality. Algorithms are also growing subjects of interest for governmental agencies, such as the European Centre for Algorithmic Transparency (ECAT) which operates under the Digital Service Act (DSA) initiative. Its focus is set on making algorithms safe, transparent, and accountable, treating them as full social actors in the network. Agency and accountability are fundamental pillars in the author's work, advancing debates on the social implications and role of algorithms within current societies.

One of the main goals of *Algoritmi, Strutture e Agire Sociale* is to understand the intricate relation between users and algorithms. It does so by tracing spaces of fluid performance within which users are both incentivised to act and strictly monitored – closely linked to the concept of "constrained empowerment" proposed by Aiello and Parry (2020) in which social media users are afforded the possibility to express themselves only if said expression is in agreement with the platform's guidelines. Furthermore, the book explores the daily interactions that users entertain with algorithmic media as a sociological entity, understood through the lens of agency and structure. Agency and structure are defined as a conceptual dichotomy between society's influence on the individual (*structure*) and the individual's freedom to mould society (*agency*). Pronzato considers these two elements under a fluid and symbiotic perspective while being cognisant of the asymmetries of power caused by algorithmic action.

Chapter 1 is interested in carefully dissecting the myth of neutrality. Algorithms are byproducts of human action; their nature is inherently biased by those humans who worked on them, the datasets used to train them, and their overall architecture. The author views them as both cultural artefacts and social agents, advocating for a contiguous and dialectical approach between the two in the study of algorithmic media. The widespread perception of algorithms as passive and neutral objects has important implications; therefore, recognising them as active subjects allows to further contextualise their action. Within this complex algorithmic ecosystem there are at play distributed processes of agency between human and non-human actors, underlying the need for a dialectical approach in analysing algorithmic environments. The author does so wonderfully by proposing a dynamic view of algorithms that understands both their relevance as pieces of culture and their importance as social actors embedded in a more complex net of relations.

The ordinariness of algorithmic processes is discussed in Chapter 2, largely focusing on their structural dimension. Firstly, the author addresses the datafication of social processes, underlying how data collection is inherently biased; the ways in which data is extracted and manipulated align with the infrastructure's needs, producing partial representations of reality. Code, both in its production and applications, is embedded within social, political, and aesthetic frameworks (Aiello and Parry 2020) that need to be understood to consciously

navigate current media environments. The author further highlights the inextricable nature of algorithmic media with concepts such as surveillance capitalism, data colonialism, and algorithmic identity, providing a thorough overview on the dimensions and ramifications of social action through algorithms. Digital platforms can shape and manipulate reality through implicit and explicit inputs, reproducing the same biases used to either train or build them. Moving away from the structural analysis of platforms, Chapter 3 focuses on the agency of both users and algorithmic media. Digital environments afford users possibilities of folkloristic algorithmic resistance, contributing to the awareness of one's agency and action within those spaces. Users are "not just puppets [...] but individuals able to interpret and subvert the proposed logics" (Pronzato 2024, 49). Algorithms also possess agency and manifest it both through affordances and Terms of Service (*ToS*). Algorithmic agency is never neutral; it enacts a form of power by structuring specific opportunities and limits. Interaction in algorithmically mediated environment constitutes a complex socio-technical assemblage in which outcomes are continuously negotiated. Recognising this mutuality in the analysis of algorithmic interactions allows to consider both the constraints and opportunities embedded in those environments while treating all social subjects – algorithms included – as relevant actors in the network, raising important questions on the extent of asymmetries of power in those spaces.

Chapter 4 investigates two empirical studies. Firstly, the author tried to grasp the relation of students with algorithmic media in their daily interactions, analysing 40 auto-ethnographical diaries from university students. Many relevant points have emerged from the analysis, highlighting not only the pervasiveness of digital platforms in the construction of social life, but also the reactions that algorithms might generate. Intensive reliance on algorithmic media can contribute to a lack of temporal and spatial awareness as the "use of digital platforms is experienced as a seamless space-time continuum" (p. 62) where endless feeds and constant connectivity blur boundaries rendering users perpetually online; others view their relation with platforms as a form of intimacy, especially since "processes of datafication are experienced as opportunities for expression and identity formation" (p. 64), raising emotional ambiguity over the relationship users maintain with algorithms. "Algorithmic mismatch" (Bucher 2018) represents a form of friction that can foster critical spaces for developing discussions around the functioning of digital platforms and favour processes of agency in rebellion of algorithmic limitations. Secondly, Pronzato's focus on medical experts highlights the "*housewifisation*" of personal and professional settings. Algorithms are naturalised as essential practices of professional development – whether it means e-learning, online video-consultations etc. – and workers are expected to be always on. "Turning on a computer and using digital platforms can at times be an emotionally charged act, as it is perceived as a continuation of the work experience" (p. 83). This broadens the scope of inquiry into how algorithms function in everyday life, highlighting not only their pervasiveness but also the psychological implications these platforms have on social practices. Algorithms shape the rhythms of daily tasks through their own forms of agency and emerge as key actors in the structuring of social life. The final chapter illustrates how the case studies further support the idea of algorithms as both cultural artefacts and social actors by deploying a hegemonic framework of analysis *à la* Gramsci. Naturalisation, routinisation, and construction of social narratives are all byproducts of absorption of algorithmic rhythms into daily standards, creating an environment in

which platforms' hegemony is learned at a young age. Although pervasive, platforms afford users the possibility to cut out spaces of self-representation and algorithmic resistance, allowing different levels of agency to exist within its contours.

Algoritmi, Strutture e Agire Sociale offers a compelling contribution to the study of algorithmic media. Its major strength lies in the dual approach in dissecting algorithms, viewed as both sociotechnical actors and cultural artefacts. That means the author understands them not only as participants in the complex net of social relations able to shape and influence society, but also as byproducts of cultures that reflect specific biases, priorities, and assumptions inherent to their action. The author demonstrates meticulous attention to the cultural processes that underpin both the production and operation of algorithmic media, consistently foregrounding the asymmetries of power embedded within them. The rich data collected strongly support the theoretical claims laid out in the initial chapters; the case studies do not only empirically ground the theoretical framework presented but also highlight how algorithms actively shape social life through situated practices. *Algoritmi, Strutture e Agire Sociale* strongly contributes to the growing scholarship interrogating the sociotechnical and cultural dimensions of algorithmic systems, sitting at the convergence of Science and Technology Studies (STS) and Media Studies. Instead of treating algorithms as opaque black boxes or neutral tools, Pronzato foregrounds them as both technologies of governance and cultural artifacts encoded with assumptions and biases about the social world. Pronzato's approach particularly resonates with Bucher's (2018) call to critically examine the programmed sociality of platforms, while extending this analysis to include the mutual shaping of users and algorithms. In doing so, the book unpacks how action and surveillance in algorithmic environments is deeply entangled with structures of power and design intentions – what Aiello and Parry (2020) have described as constrained empowerment, wherein user's agency is neither fully enabled nor repressed, but rather filtered through algorithmic governance. Importantly, the book does not isolate algorithms as mere technical entities but situates them within a broader sociocultural discussion. This attention to context enables Pronzato to draw out the ways in which algorithms not only operate within digital environments but also actively structure social practices as they "help us know what there is to know and how to know it" (Gillespie 2014, 168). Furthermore, the author addresses how commercial imperatives often drive algorithmic design in ways that prioritise profitability over inclusivity, thus reinforcing patterns of marginalisation, especially towards minoritarian groups. In line with Noble's (2018) critique of algorithmic oppression, Pronzato dissects the ideological and political infrastructures of algorithmic systems, dismantling the myth of neutrality and gathering attention towards their material consequences in terms of representation and structuring of social life. By bridging the empirical analysis of interactions with and through platforms with theoretical insight into the socio-cultural effects of algorithmic mediation, Pronzato shows the importance of both STS and Media Studies in the understanding of what algorithms do and how they do it. The book not only dialogues with but also meaningfully advances interdisciplinary debates on algorithmic power. Its close engagement with both infrastructures and imageries of algorithmic media makes it particularly relevant for scholars interested in the cultural and scientific politics of technology. Notwithstanding, the analysis would have benefited from

a broader geopolitical approach. While it is true that many algorithmic infrastructures are birthed in the West, overlooking the development of eastern platforms (think about Tik-Tok, TaoBao, Temu etc.) risks limiting the applicability of the proposed framework. A more global comparative perspective would have enriched the book's critical scope and further contextualised its otherwise rigorous insights. Despite this limitation, it remains a valuable resource for scholars interested in algorithmic action, identity, and environments.

References

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