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NARRATIVES OF DIGITAL SOCIAL INNOVATION.
"READING FOR DIFFERENCE" SPACE AND SPATIALITIES
OF SOCIO-TECHNOLOGICAL NETWORKS
IN THE AUGMENTED CITY

1. Making the case for a critical geography of Digital Social Innovation in the augmented city. – In the last decade, a wide variety of social innovation initiatives performed through digital processes, supported by digital tools, and realised in the digital space (a term which refers to more than computer code and "is inclusive of the technologies, methods, performances and communication enabling us being digital", McLean, 2020, p. 13) have been experimented, implemented, scaled up and uptaken in worldwide cities (see Certomà and Corsini, 2020). Depending on the intentions and interests of the activists, innovators, hackers, or makers promoting them, these are labelled as digital social innovation (hereafter DSI), digital innovation for society, tech4good, social tech, civic tech and similar. The concept of DSI is the one that better conveys the social orientation toward emancipatory intervention and therefore is adopted in these pages. Whatever named, these practices share common traits that justify their being considered as a whole, because all of them refer to heterogeneous, multiscale and multitemporal collective practices, supported by the diffusion of digital connectivity devices and networks, incorporated in socio-technological systems that allow the establishment of novel organizational modes of society. The concept of DSI has been mainly popularised in institutional European research and innovation context by referring to a broad and diversified domain of initiatives through which communities of innovators (whose intentions range from strengthening, reforming or even subverting the neoliberal institutions that support the capitalist system) adopt digital technologies (i.e., the technologies using digital infrastructure and relying on digitisation processes) and internet connectivity to advance, in general terms, knowledge and solutions to tackle with a wide range of social needs (e.g., employment, welfare, care services, environmental quality…).

From enabling participation in public mapping, planning or decision-making, to crowdsourcing ideas for solving shared problems, designing or providing local services, or fostering online civic initiatives, DSI practices emerge in place-based and context-specific initiatives and therefore bear a strong relationship with the urban space. Moreover, they impact the urban organisational logic, functional structure and operative processes. Notably, DSI networks operate in the interstitial – still densely-populated environment defined by McLean (2020) as the "more-than-real world" (an epistemological escamotage paying homage to the post-anthropocentric tradition of hybrid geography; see Whatmore, 2002) to identify the space where humans, digital technologies, nonhumans and the environment interact to change the digital geographies (i.e., the ideologies, politics and practices associated with the digital; McLean, 2020) of the city, where both the physical and the virtual dimensions count as real in social actors' life. As a matter of fact, with the advent of the digital revolution, both the concept and the experience of the urban space underwent profound changes; and the physical dimension of the city merged with the virtual one in a single "augmented urban space" (De Cindio and Aurigi, 2008). This space is mobilised in DSI processes and produces new spatialities (Merriman *et al.*, 2012; Sheppard, 2004), i.e., new constructions of collective imaginary emerging from the social encounter with space mediated by digital tools and processes (Ash, 2009; De Souza Silva, 2006; Graham and Zook, 2013; Leszczynski, 2015).

The relationship between DSI initiatives and the urban space (conceived in the broad sense of economic, social, political and cultural space) has been tentatively investigated by innovation management and regional studies scholars seeking to identify the optimal conditions for innovation to flourish (e.g., van der Have and Rubalcaba, 2015; Dacin *et al.*, 2010). Nevertheless, it remains a very marginally explored topic in critical geography research – despite a recent flourishing of research on cognate areas, such as digital methods, smart cities and platform society (see Celata and Certomà, 2022). To understand what prevented critical geography

from broadly engaging with DSI and what perspective would better help us at grasping its spatial relevance, I propose here a research strategy that builds upon Gibson-Graham's prescription of "reading [DSI] for difference" social agency, rather than for dominance, by de-focusing from the capital centric perspective of neoliberal reading of DSI; and entails a tripartite exploratory process including: a) ontological reframing, b) excavating the possible and c) celebrating possibilities.

2. Reading for difference in Digital Social Innovation. – To explore the geographical meaning and relevance of DSI, I suggest adopting the methodology Gibson-Graham elaborated in their work on alternative economies (Gibson-Graham, 1996). This includes three techniques of "doing thinking" for geographers: ontological reframing the investigated object; excavating the possible via reading against dominance and "for difference"; and generating possibilities toward genuinely emancipatory innovation (Gibson-Graham, 2008; 2020).

Gibson-Graham's technique roots in their work on post-capitalism (2006) and diverse economies (2008). It suggests that a binary and dualistic reading of social phenomena to offspring from the essentialist narratives about the "pervasivity of capitalism", which reduces every act to be pro or against it, so that even (allegedly) non-capitalistic forms of agency are always and only read in contraposition to capitalist ones. Consequently, also the radical geographers and sociologists who work on alternative practices define them in opposition to something else (notably capitalism), and by opposing neoliberal capitalism contribute to reinforcing its cultural dominance. This "negative, paranoid, conspiratorial perspective reducing all phenomena to expressions of some fundamental threatening thing, often neoliberalism" (Gibson-Graham, 2008, p. 1173) paradoxically discourages the search for alternatives; and lock-in societal agency into mere attempts to "destabilise the discourse of capitalocentrism that situates a wide range of economic practices and identities as the same as, opposite to, a complement of, or contained within capitalism" (*ibid.*, p. 623). Gibson-Graham calls this attitude "reading for dominance" and contests that, by adopting it, also radical thinking can be blind to the genuine value of differences (Thompson, 2019). On the contrary, by eschewing the negativity of dualistic reading we can "de-exoticize power and [to] accept it as our pervasive, uneven milieu. A differentiated landscape of force, constraint, energy, and freedom would open up (Allen, 2003) and we could open ourselves to the positive energies that are suddenly available" (Gibson-Graham, 2008, p. 619).

The purpose of my strategy is "reading for difference" in the dominant narrative of DSI (which interprets DSI in entrepreneurial and market-oriented terms) by showing that some of the most intriguing initiatives emerge in the grey zone between public, private and civic agency. Together with bringing along prolific contradictions, these latter continuously and practically question the dividing line between oppositional and negotiational practices. Nevertheless, the ascription of DSI to the neoliberal pole of social antagonism determined the disinterest of critical geographers. With my proposal, I rather suggest that precisely the "in-betweenness" of DSI can profitably engage critical geographers in the investigation of spatial implications of DSI networks in the city.

- First of all, I suggest that an epistemological reason likely contributed to situating DSI and its spatial entwinings outside of the critical geographers' sphere of interest. By definition DSI roots in the social innovation domain, described in time by social scholars as a dichotomic (and sometime dualistic) sphere where neoliberal institutional initiatives confront critical grassroots practices (Seyfang and Smith, 2007). This description produced a polarized interpretation of social innovations and the belief that the dominance (in socio-economic but also political imaginaries) (Han and Hawken, 2018) of social innovation processes connivant, complicit with or co-opted by the capitalist system defused the potentiality of other creative, non-institutional and grassroots forms of social innovation. Such an interpretation reverberates on DSI that is often ascribed – thanks to the role played by the technological innovation market – with the first pole of the dualism, largely popularised by management perspective. Therefore, alternative DSI practices emerging at the margins of the mainstream neoliberal ones have been depicted in opposition to the dominant reading as revolutionary or subversive. Through a "reading for dominance" epistemic process, alternative DSI initiatives are presented always and necessarily in dualistic opposition toward the mainstream, capitalocentric ones. As a consequence of this polarized reading, critical geographical research becomes suspicious of DSI in general and mainly devotes attention to a limited portion of this wide, heterogeneous phenomenon. Notably, radical geography – despite avoiding reference to the DSI category – endorses the polarized classification of social innovation, when engaging with cognate phenomena of society digitization, digitalisation and platformisation or the critique of the smart city model. In so doing, it reads DSI

initiatives "for dominance". Thus, further than their connivance with the neoliberal institutions of digital capitalism, it also (and more worrisomely) reinforces the power of a dualistic interpretation that interprets all the diversified, complex and ideological boundaries-transgressing DSI initiatives as manifestations of one or the other pole of the dualism. To address this problem, I would engage with Gibson-Graham's "reading for difference" strategy and consider how the dominance of a "thick description" of market-oriented, business-led and entrepreneurial DSI can be replaced with a more complex and nuanced "weak descriptions" (Gibsson-Graham, 2008) of its polyvocal nature, to account for cross-bordering initiatives and their social prefigurations.

- Second, I do not aim to explore DSI alternative reading by digging into the sphere of social antagonism, but by adopting a deconstructive gaze which makes visible the crumbling of dominant reading within the dominating system itself. As Gibson-Graham explain "Identifying dominance is thus the grounds upon which a reading for difference takes place" (2020, p. 8) and makes "the subordinated identities and activities more visible [by] allowing the possibility that they have independent agency" (*ibid.*, p. 8). This way, DSI can be repositioned as an object of research for critical geography able "to challenge ingrained alignments of power that shut down the potential for multiple trajectories to take flight" (*ibid.*, p. 9). I acknowledge that the dismissal of DSI in critical geography is associated with the neoliberal approach (whose attempt is to make hard digital capitalism more palatable with a social flavour) and that radical scholars identified anti-capitalist digital activism movements as emerging in opposition with the first (Lynch, 2019). Nevertheless, I chose a non-dualistic standpoint to give an account of the intrinsic complexity of the socio-technological agency in the digital sphere, which is not mindless optimistic but – while denouncing the intrinsic contradictions of the capitalist system – refuses to embrace a conflictive perspective. I suggest that the material-semiotic and, particularly, actor-network-theory (ANT) perspective (Law, 1995; Latour, 2005) is adequate to support a non-dualistic understanding of the spatial entanglements of complex social networks involved in DSI practices. As Jonathan Murdoch explained, in welcoming the ANT perspective into geographic research as the bridge toward "associationalist thinking", material-semiotic perspective allows "negotiating between opposing camps by investigating links rather than distinctions" (Murdoch, 1997, pp. 321-322). This means that rather than "reading for difference" social phenomena and feeding dualistic thinking, it provides a heuristic tool for reading for linkages. The emerging geography of association "traces how actions [which] are embedded in materials and then extended through time and space, provides one means to overcoming the dualism" (*ibid.*, p. 321). Such a perspective often adopted (Whatmore, 2002; Hinchliffe, 2007) and also discussed in critical geography (Heteringhton and Lee, 2000), offer us a useful standpoint to identify the multiple spaces and spatialities of the city impacted by DSI.

- The third and last strategy suggested by Gibson-Graham builds upon the previous explorations on how heterogenous networks generating DSI practices produce (and not merely take place in) the augmented urban space. I consider here how most of the existing digital geography reproduces binary interpretative schemes but also suggest important issues for appreciating the spatial consequences of the digital revolution beyond the a-critical technology-optimism of digital capitalism. By exploring the implications of the pervasive infiltration of digital technologies in the city, creative possibilities for a non-dualistic epistemology and pragmatic of DSI emerge via the disarticulation of material-semiotic relationships of social reproduction, representation and power (Certomà, 2020). A geographical research agenda for uncovering and exploring the hybrid and uncategorized possibilities that proliferate in the augmented cities can thus be drafted. In it, a conversational (Wily, 2021) (rather than confrontational) epistemology of DSI merges with a pragmatic programme, because "reading for difference" is "a research method and an intervention in making worlds" (Gibson-Graham, 2020, p. 12).

- DSI domain emerges, thus, as a domain whose complexity, fluidity and fuzziness cannot be accounted for by the neoliberal perspective, nor by the radical perspective which makes social antagonism the watershed for categorising acceptable and non-acceptable practices. Rather, this research plan may offer an account of DSI that – despite not providing "thick descriptions" of social agency – "foregrounds details and descriptions and tenuously performs connections" (*ibid.*, p. 10).

3. Conclusion. – In performing my research agenda, I aim to celebrate the in-betweenness nature of DSI initiatives that emerge in the grey zone between polarised epistemologies and practices; and associate these with a weak theory that "welcomes surprise, tolerates coexistence, and cares for the new, providing a welcoming environment for the objects of our thought" (Gibson-Graham, 2008, p. 619).

What makes this reasoning relevant for digital geography research in general and digital geography of DSI in particular, is the invite to overcome a subservient understating of the material world because society is

> held together not by humans or passive "things in themselves" but by active sets of relations in which the human and the nonhuman continuously exchange properties. Societies – and spaces – emerge from the collective activities of these heterogeneous actors between which powers are distributed, responsibilities are allocated, actions are constructed and spaces configured. It is the distributions, allocations, constructions and configurations which should catch our attention. But our attention can only be caught if we are alert to the many possibilities which are likely to emerge from the complex combination of social and material resources in networks (Murdoch, 1997, p. 334).

Therefore, in DSI initiatives, digital or technological artefacts are not merely seen as the medium through which specific social relationships flow but constitute, constrain, frame, and characterise these relationships. Differently from what the neoliberal, positivist, and dualist, perspective on DSI tells us, digital technologies are not a means at service of the (human) society; they are the society.

Following the inspiring words of Murdoch and drawing them near to Gibson-Graham's, we obtain a perspective that allows us to eschew the "invidious distinctions" between neoliberal and revolutionary forms of DSI. Not because they are all the same (i.e., because there are no differences) or because they are indifferent (i.e., there are ideological differences but these are irrelevant), but because socio-techno-environmental networks which make them happen are constitutive hybrid and impure, from ideological, pragmatic, material and semiotic perspectives. The more-than-real agency space these networks forge in the augmented city is characterised by encounters, negotiations and alliances, links with the difference.

Murdoch's approach is resonant with Gibson-Graham's preference for a weak theory that refuses dualistic and polarized interpretation to allow openness:

> The practice of weak theorizing involves refusing to extend explanation too widely or deeply, refusing to know too much. […] Strong theory has produced our powerlessness by positing unfolding logics and structures that limit politics. Weak theory could de-exoticize power and help us accept it as our pervasive, uneven milieu. We could begin to explore the many mundane forms of power. A differentiated landscape of force, constraint, energy, and freedom would open up (Allen, 2003) and we could open ourselves to the positive energies that are suddenly available (Gibson-Graham, 2008, p. 619).

In my research plan, I buy into this perspective to reframe the ontology of DSI as intrinsically connected with openness, operating in a grey zone where no predefine outcomes exist, and where unexpected and uncanny coalitions may emerge. Significant work is necessary to show how many practical manifestations of DSI can destabilise the "dominant capitalocentric representation" (*ibid.*, p. 621) in the multiple niches or increasingly more at the light of the sun where new hybrid experimentation emerges and proliferate.

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RIASSUNTO: *Narrative dell'innovazione sociale digitale. "Leggere per differenza" spazio e spazialità delle reti socio-tecnologiche nelle città aumentate.* Le iniziative di Innovazione Sociale Digitalmente abilitate (di seguito DSI) promosse istituzionalmente e dal basso stanno proliferando nelle città di tutto il mondo, influenzate e influenzate a loro volta dalle logiche organizzative urbane, dalle strutture funzionali e dai processi operativi. Nonostante negli ultimi anni abbiano attirato un crescente interesse in una vasta gamma di discipline, rimangono molto marginali e quasi inesplorate nella geografia umana. Suggerisco un piano di ricerca per analizzare le ragioni alla base di questa tendenza e spiegare, sulla base del recente fiorire di analisi geografiche critiche, come l'analisi delle implicazioni spaziali del DSI possa portare nuove intuizioni esplorative. A tal fine adotto l'approccio metodologico tripartito di Gibson-Graham di "leggere per la differenza" dell'agenzia sociale, in particolare le iniziative DSI.

SUMMARY: Institutionally promoted as well as grassroots Digitally-enabled Social Innovation (hereafter DSI) initiatives are mushrooming in worldwide cities, both influenced by and influencing in return the urban organisational logics, functional structures and operative processes. Despite these attracted increasing interest in a wide range of disciplines over the last few years, they remain very marginal and almost unexplored in human geography. I suggest a research plan to analyse the reasons underlying this trend and explain, building upon the recent flourishing of critical geography analyses, how the analysis of spatial implications of DSI can bring novel exploratory insights. To this end I adopt Gibson-Graham's tripartite methodological approach of "reading for difference" social agency, notably DSI initiatives.

Parole chiave: innovazione sociale digitale, innovazione sociale, geografia critica, semiotica materiale, Gibson-Graham
Keywords: digital social innovation, social innovation, critical geography, material semiotic, Gibson-Graham

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