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The Impact of Digital on Research, Socialisation, and Communication Processes

Felice Addeo, Sergio Mauceri, Gabriella Punziano

Social scientists constantly face new challenges when conducting empirical research. This is especially true in the so-called society 5.0 (Gladden, 2019), an increasingly digital, changing, and multifaceted society which challenges the established methodological and sociological canon in favour of innovative practices in the analysis of this social multiverse in which everyday life is now a complex fusion of digital and analogic scenarios. Being always connected (Bull, 2010), people and societies, with their institutions and infrastructures, revolutionize social forms, consociations, and structures, giving rise to meta-comprehensive issues to be assessed not only about the subject, the structure, and their interactions in the governance of emergent forms of social living, but also about the meta-combinations that digital transpositions create as subjects with a new and personal agency (Passey et al., 2018). Therefore, every system and social structure is not exempt from change, and social scientists applying traditional theoretical and empirical frameworks often experience some limitations in trying to elect these hybrid systems and social structures as cognitive objects and analytical referents. It is thus that the digital and its agency become the central knot to unravel for the social researcher who, beyond the field of application, will have to pose a series of meta-questions that are no longer negligible in a society undergoing a digital turn (Lupton, 2015). Digital technologies found a place in culture and society inhabited by humans and by the products of their actions, reactions, and interactions (Punziano, 2022). Thus, digital technologies have become parts of our daily materiality, entangled in the structures of society in many different, complex, and even contradictory ways, deeply changing the practices, symbols, and shared meanings of our societies (Veltri, 2021).

In this special issue, titled *The impact of digital on research, socialisation, and communication processes*, the digital is placed at the middle of a paradig-

matic vision in which it is not only a transposed scenario of social life and its structures and processes, but is a subject acting on the processes and structures it involves. This explains why this issue focuses on two fundamental spheres of society. On one hand, socialisation understood in the broad sense of a complex process through which the individual becomes a member of society, integrating into a social group or community through the dynamic and contingent interchange between the individual and the environment, in the context of this special issue theorised as a set of environments or digital/not digital social multiverses. On the other hand, communication and its processes are understood as elements of transmission without which it is impossible to disclose, construct and reconstruct shared social meanings, even when the spaces, the forms, and the subjects of exchange multiply. It is also undeniable that the Covid-19 pandemic from late 2019 onwards acted on society and its structures in the direction of the three 'A's: acceleration, accumulation, avantgarde (Velotti, Punziano, Addeo, 2022) jointly on processes under investigation than on the way to study these processes. Research, researchers, methods, and approaches, among others, become further subjects of change, leading us to question the future of the traditional research canon in the study of digital society. Finally, the aim of this issue is to examine both the impact of the digital on contexts such as education, policy and politics, sensitive population and topics – such as gender and sexualities, old and new disparities and inequalities – and the spread of innovative digital research practices. Due to the richness and breadth of the topics covered in this issue, it was decided to divide this introductory essay into paragraphs that will allow readers to focus on specific areas and topics.

From the perspective of education and digitalised processes: Distance learning during COVID-19 pandemic

The global health emergency caused by the spread of Covid-19 forced schools and universities to rapidly reorganise their educational activities to ensure continuity through the use of digital technologies. Although the digital revolution in education has been talked about for some time, many teachers have historically been reluctant to embrace the digital world (Andrade, 2015). This situation has quickly evolved as a result of the Covid-19 crisis, where social distance restrictions made distance learning (DL) practices necessary. As a result, without enough time to properly design an adjustment of the educational style to the imposed change, there has been a rapid upskilling amongst educators and greater usage of digital tools.

The articles selected for this section of the special issue analyse the Italian context, taking as reference the reactions of students (upper secondary school and university) and university teachers to the DL experience. This

experience, which was almost entirely unprecedented for the school system, began in Italy on 4 March 2020, when the Prime Minister, in light of the highly infectious nature of the Covid-19 virus and the increase in cases throughout the country, signed the decree establishing the closure of schools of all levels (DPCM 4 March 2020). Initially, the provisions issued during the emergency phase allowed a degree of autonomy for schools in the timing and manner of implementation of DL and in the choice of the type of platform to be used. Although it was suggested that teachers gradually abandon the usual model of assigning homework and exercises to be completed at home because this could not be assimilated to DL, it is clear from the Note of the Ministry of Education dated March 17, 2020, containing the operating instructions for the emergency phase, that teachers favoured videoconferences, video lessons, group chats, and the “virtual classroom.”

Further ministerial notes guided the process with subsequent pronouncements. Since the ministerial decree was issued all schools and universities, albeit with different times, methods and outcomes, have reorganised their educational offer, initially thinking that recourse to DL would be for a limited period of time and gradually realising that this reorganisation of teaching would extend, albeit in different ways such as mixed teaching, for the entire duration of the pandemic.

Along with the emergence of legislative directives and inquiries into the effects of health emergencies on the school system, a public discussion with polarised supporters and opponents of DL emerged. While one of these opposing camps has emphasised the innovative potential that using the Internet and digital technologies can have in terms of a rapid increase in digital skills and practices, the other faction has concentrated on the negative impact in terms of school dropouts, the accentuation of pre-existing social inequalities, the impoverishment of the relational sphere, and the negative outcomes in terms of learning ability. Additionally, there are voices that avoid oversimplifications and honestly present a more nuanced picture of the effects, highlighting related advantages and disadvantages.

As regards the scientific literature on these topics, some studies show how many teachers have re-proposed, with marginal readjustments of timetables and content, traditional teaching strategies, with the substantial difference that the lessons took place via videoconference (INDIRE, 2020; OECD, 2020, SIRD, 2020). Thus, only a few cases highlighted the potential that the use of information and communication technologies (ICTs) could have with respect to didactic innovation. Other scholars emphasised the lack of skills amongst teaching staff to deal with the digital revolution that has invested the education system in the pandemic era (Ranieri et al., 2020). Some research focused on students’ reactions to the DL, providing a picture of different and in many cases ambivalent reactions.

The articles included in this special issue by Faggiano and Fasanella and by Faggiano and Mauceri are based on big national web surveys, which, among other topics, focused on the perceived comparison between DL and traditional teaching, from the perspective of the students. In both cases, the students do not appear to be a united front that has reacted to DL in a homogeneous manner. The most negatively affected students are those who demonstrated pre-existing vulnerabilities and inequalities in relation to the pandemic; however, there are also students who have adapted positively to the change, grasping its positive aspects.

However, both studies highlighted the negative impact of DL on students and teachers as it gives rise to widespread impatience, which translates into a worsening of relational resources at all levels, greater difficulties in concentration and learning, and the greater burden of commitment required, even where the results in terms of performance have not changed.

One of the most significant findings in Faggiano and Fasanella's contribution is that among the different student groups identified through the use of multivariate analysis (Multiple Correspondence Analysis and Cluster Analysis), there is one cluster, labelled "Consensual Opportunists," that includes about a fifth of the sample and does not find any criticality in the DL for instrumental reasons related to the opportunity to close quickly and without a particular preference. According to the authors, in this situation, students and teachers would be complicit in enabling students to leave school without encouraging dedication and enthusiasm to study. According to Faggiano and Fasanella, it is precisely this group—which was already at a disadvantage due to their familial background—that faces the highest risk of social exclusion and being prevented from advancing in society.

The article by Faggiano and Mauceri discusses the results of a panel web survey, which shows the substantial stability of DL assessments even one year after the national lockdown, during which the first round of data collection among the Italian population was launched, dedicating an in-depth focus to students' experience. The fact that the reactions of university students have not changed shows that the fundamental alteration in how education is organised has not lessened the feeling that patterns established before the outbreak have been disrupted. Indeed, critical evaluations of the consequences of DL at many levels, with the notable exception of a perception of easier time management, considerably outnumber expressions of happiness and positivity about the changes among university students, just as they do among upper secondary school students.

But even here, there is a group—albeit a small one—that appears to favour online learning over in-person instruction. These are older university students who have families to support in addition to their studies and jobs.

Therefore, for these students, the integration of university life and extra-curricular activities has become easier, leading to more a more positive view of DL.

The paper by Decataldo and Fiore addresses the issue of work-family balance from the perspective of a sample of university lecturers at the Bicocca University of Milan, focusing on the role of technostress in lecturers' work-family balance. By means of a Structural Equation Modelling, the analysis allows us to check, also in predictive terms, the impact of two main dimensions of technostress (techno-overload and techno-insecurity) on lecturers' work-family balance in light of their perception of digital availability, gender, parenthood and relationship status. In particular, the work-family conflict is significantly accentuated by techno-overload, i.e., by perceptions of being invaded, having less time for family, having tight deadlines, and being obliged to work faster. Contrary to the hypothesis, the second dimension of technostress, which has to do with unfamiliarity with the use of digital technologies, negatively predicts work-family conflict (the more techno-insecurity increases, the more the dependent variable decreases). The result is probably due to the fact that the lack of familiarity in the use of digital technologies did not translate into a commitment to bridging previous gaps that conflicted with family commitments.

The picture that is painted by the articles under discussion concludes by urging contemplation of how future school and university systems may create a roadmap for developing digital skills. During the pandemic there was clearly a desire to apply traditional teaching methods to a situation that called for the use of new approaches that ensured quality teaching. However, in Italian educational contexts, the practise of distance learning is not wholly new. For example, in our country, the Ministry of Education has acknowledged the importance of ICTs and digital competence for citizenship, promoting a series of initiatives that resulted in the National Digital School Plan within Law 107/2015, *La Buona Scuola*.

In order to foster learning skills, new educational models should be planned and put into practice that are capable of stimulating interaction with students, enhancing the cognitive and also the emotional component of distance learning, in order to guarantee the effective development of cross-cutting skills (social, citizenship, learning to learn) and digital literacy, which appear increasingly central within school-university curricula.

As far as teachers are concerned, initiatives should be promoted in schools and universities to support an 'innovative learning' model, marked by the use of a plurality of digital tools and on the discussion and creation of content by the participants. On the level of work-life balance among educators, the pandemic certainly entailed an increased commitment, especially due to the coexistence of women and school-age children in the home. It is

to be hoped in this regard that this was an anomalous and unrepeatable experience, and that in the future other experiences of ICTs can be envisaged, without emergent situations such as the one experienced in recent years.

From the perspective of inequalities: capital, practices, population, and marginalities

In recent years, sociological research on education has paid significant attention to the spread of information technologies, achieving a turning point that could be defined as paradigmatic, insofar as the digital takes on an increasingly central dimension in educational and training processes and in the ways of rethinking them, from a peripheral sphere that was initially looked upon almost with concern to a resource to be invested in to foster up-to-date learning for future generations (Di Palma & Fusco, 2022). There are also numerous studies that address how the digitisation of educational processes impacts on social inequalities (van Deursen et al., 2021). The studies on these aspects focused mainly on the impact of the digital divide, access and competence issues, otherwise referred to as digital capital (Ragnedda, Ruiu, Addeo, 2020) neglecting, on the other hand, how digital technology can foster processes to overcome and fight social inequalities. From this point of view, the articles presented in this issue mainly deal with the second issue, highlighting how digital technology can be useful in improving the condition of marginalised subjects, such as for people affected by specific attention disorders and people who are LGBTQ+, or in favouring the computerisation of those tools useful in guaranteeing a congruous and equity-oriented inclusion process, as in the case of mentoring and linguistic-cultural mediation (Beaunoyer, Dupéré & Guitton, 2020).

In particular, Lee Kwan Meng and Yaprak Pinar's article puts the practice of mentoring at the centre of the scientific debate as a central aspect of the educational and training processes, particularly in an era where the latter has lost its top-down approach—where the relationship between teacher and learner was strongly structured—in favour of a more horizontal and flexible structure; the aim was to enhance everyone's knowledge in the educational relationship according to the principles of "care" and "cooperation" (D'Alessio, Laghi Ciancalone, 2010) in a peer-to-peer experience. Mentoring in this sense plays an important role insofar as it proves to be a valuable resource in fostering processes of horizontal socialisation of the knowledge and technical skills of each participant in the educational relationship, as well as facilitating the process of inclusion of individuals with difficulties in school and training contexts.

Thanks to digitisation, enormous possibilities are opening up for these activities that are, however, still unexplored. Lee Kwan Meng and Yaprak

Pinar's essay explores those processes that can foster and improve the quality of mentoring interactions; a meta-reflection, therefore, on the most widespread mentoring practices, but in the light of the opportunities offered by digital platforms and technologies. Doing or "learning to do" mentoring through the new tools offered by information and communication technologies further enhances the "inclusive" character of this practice, which pertains to both the formal and non-formal domains of education, and which places the concept of "care" at the centre, a category that invites us to assign mentoring functions that go well beyond the mere transfer of knowledge. What contribution can new information and communication technologies make to the practice of mentoring? How does a lack of digital skills affect the success of the mentoring relationship? And if mentoring can be described as an inclusive practice, how does the digital divide compromise this basic assumption? These are some of the reflections suggested by the essay and that educational and social research will have to address in the future with a view to reducing educational and social inequalities and disparities more generally.

The essay by Mette Rudvin, Edoardo Di Gennaro and Roberta Di Rosa also moves in the direction of exploring the advantages offered by digitalisation, especially in relation to the recent Covid-19 pandemic that has forced many of the activities carried out in person, such as linguistic-cultural mediation, to be continued remotely, on digital platforms. The essay investigates the pedagogical potential of virtual reality used as a teaching tool for a linguistic-cultural mediation course aimed at operators dealing with refugee migrants, reporting the results of a pilot project carried out at the Agrigento campus of the University of Palermo. The opportunities offered by new information technologies are here exploited to the full insofar as they make it possible to virtually recreate—through a software platform that includes various scenarios—typical interactional situations that future mediators must learn to deal with, before interfacing with migrants. This form of situated learning is thus crucial for acquiring long-term language skills (verbal/non-verbal language, body gestures, pragmatics, fluency, vocabulary).

The fully digital immersive multimedia experience tests terminology, supra-linguistic pragmatic communicative/interpersonal characteristics and conversation coordination (turning and interrupting; eye gaze and body language; active listening; voice projection). Also in this context, the digitalisation of educational tools favours a rapid sharing of knowledge and experience among trainees, who thus become familiar with their own reactions to traumatic content and their own levels of empathy in the face of the different lived situations involved in mediating with migrants. Moving linguistic and cultural mediation into a virtual environment proves to be a winning option and not only related to this emergency moment. The digital

skills of migrants, as contemporary literature on migration highlights, are much more advanced than we think (Merisalo, Jauhiainen, 2019), a bit like in the past with traditional media, the use of social media has highlighted the potential of an anticipatory socialisation process that favours the inclusion of migrants well before they move to a new country, thanks to the possibility of learning about the customs and habits of the country, as well as the most widespread collective imaginaries of the host society (Dekker & Engbersen, 2014). Investing in this area, both in terms of scientific research and the provision of ad hoc digital tools, may prove promising insofar as a distance mediation activity may foster, even before entry into our country, a relationship of trust between mediators and asylum seekers, as well as a more situated understanding of their needs. Knowing these experiences in advance, hearing their stories, will allow services to intercept their needs (social, legal and cultural) more quickly and this will prove fundamental not only in the early stages of the reception process, but also for the subsequent inclusion process.

Delli Paoli and Masullo, again with a view to a dual analysis from processes to marginalities, shift the focus of attention to the digitalisation of the expression of sexuality. The main topic of the essay is asexuality and how it affects identity and society in the age of the Internet. Asexuality raises specific issues due to the large number of terms, and concepts through which asexuals articulate their differences and affirm their commonalities, especially when these process flow through the Net. Asexuality, which is defined as a lack of or low level of sexual attraction, questions sexual normativity, which forcibly enforces sexuality and sexual attraction as a requirement. This paper explores the experience of self-identification of members of one of the most important online asexual communities through digital ethnography. The online community represents a coping mechanism used to manage and overcome social threats deriving from a sexuality affirmative social context. It serves as a tool to subvert compulsory sexuality, create novel terminologies and discourse structures, downplay the significance of sexual connections, and establish new categories of non-sexual interactions. The essay proposed by Angela Delli Paoli and Giuseppe Masullo unveils other potentialities of the digital both in theoretical terms and in terms of the expendability of methodological approaches applied to digital contexts. In the first case, the spaces of the digital environment prove to be a precious resource for the self-determination and emancipation of subjects belonging to categories that are notoriously stigmatised (as in the case of asexuals examined here); in the second case, the potential offered by digital research particularly when one intends to study a population whose characteristics escape the understanding of researchers in offline reality. The article offers a novel fresco on asexual people, on whom very few studies exist in our country, highlighting

the difficulties they encounter in the context of web society both with cis-gender and heteronormative people and with other subjects belonging to the broader LGBTQ+ community. The essay proposes a typology that allows us to trace the different identity profiles of asexual people, thus not only shedding light on this little-known phenomenon, but also allowing us to overcome bias that sees asexuality as a sexual orientation, whereas, instead, the authors highlight how this choice is only one of the many possibilities that individuals have in order to best correspond to their affective and subjective desires.

The essay also answers a key question: how does digitalisation influence socialisation processes, in this case socialisation to sexuality? The analysis of the community of asexual people allows us to understand how these digital spaces prove to be fundamental for asexual people (as is also the case for other categories pertaining to the LGBTQ+ community) in order to familiarise themselves with terms, languages, imaginaries that have not yet found a complete explication and signification in offline reality (Masullo, 2021). Discussions on the community of asexual people thus make it possible to clarify doubts, to compare oneself with other people who experience the same uncertainties regarding their own process of identity self-determination, to acquire those scripts necessary to feel adequate within relationships that most likely continue offline and that otherwise would have no way of being realised. The use of digital ethnography proves to be particularly suited to the study of this type of population, which would most likely have been impossible to achieve with other research approaches, but which also raises ethical questions that, in the writer's opinion, research in this field will have to continue to address in the future. This is in addition to the problematisation of the digital as a tool in which practices (such as mentoring or tutoring) are transferred to a scenario in which they are enacted and directly define and impact the subjects inhabiting this digital scenario.

The here presented researches has the merit of highlighting the pliability of social research tools, as well as the researchers' ability to best combine the potential of classic social research tools (i.e., face-to-face interviews, telephone interviews, focus groups) with those now made available by online research. If, on the one hand, these methodological choices are the result of the emergency moment being experienced, on the other, they have made it possible to discover several advantages of working from an integrated perspective, an aspect that invites us to reflect once again on the need to systematise this body of knowledge and opportunities that have emerged from these "experimental" empirical investigations, which, on the contrary, would be in danger of being lost if conceived only as the outcome of choices linked to the contingency of the times we live in (Velotti, Punziano & Addeo, 2021). It is with this essay that the idea of the digital, first understood as an

object and as a scenario, also unfolds as a pure methodological tool whose problematisation finds its *raison d'être* in the digital methods' methodological framework (Rogers, 2010).

From the perspective of communication and digitalised processes: tackling digital inequalities

Communicative processes, the mirror of socialisation to the means and technologies that make them possible, are the subject of the last two papers in this issue, both related to a very particular moment in the history of mankind, and in particular focused on the Italian reality: The Covid-19 pandemic. On the one hand, communication via social media, and on the other, institutional communication, alternate in a circle of reflections that explicate the pervasiveness of communication processes, the digital foundation that makes them elusive, and the substratum of new questions, new traps and new opportunities that are concealed this time behind a digital understood as a channel of the social multiverse.

The use of social media platforms during the Covid-19 pandemic had different and sometimes conflicting motivations. There is, however, a subtle fil rouge linking the different ways in which people relate to social media: the need to have a channel through which to express more or less well-founded fears related to the pandemic and its aftermath, exorcising atavistic fears that over time unexpectedly began to take real form.

Indeed, the pandemic crisis has provided a concrete foundation for the collective anxiety that, according to some authors (Russell, 2005; Green, 2013; Addeo, 2015), has permeated Western societies since 9/11: "infectious diseases are indeed the new paranoia that's striking Western society" (Green, 2013, p. 5).

The restrictions imposed by the lockdown have exacerbated the general feeling of insecurity and anxiety; among many other individual and social consequences, they have almost completely wiped out present forms of sociability. This combination of factors has consolidated the use of online communication practices to sprinkle networks of family, friendship and professional relationships (Addeo, Parziale & Catone, 2020).

Social media played an ambivalent role during the Covid-19 crisis: Facebook, Twitter and some messaging apps, above all WhatsApp, on the one hand, social media and messaging services had a fundamental bonding function for social relationships, as they were the main channels through which to communicate with relatives, friends and colleagues, on the other hand, these channels acted as plague spreaders by flooding the sphere of public debate on social networks with fake news, hoaxes and conspiratorial articles, which fueled feelings of uncertainty, anxiety and anger among Italians. This

infodemic drift has been amplified by social media, resulting in an exacerbation of the health emergency (Mesquita et al, 2020); according to Ruiu (2020), in fact, the crisis management in the first pandemic stage was hampered by many errors which caused misinformation and the proliferation of fake news. Increasing cultural capital is the main resource for tackling misinformation; indeed, many authors emphasise the pressing need to promote educational pathways aimed at increasing population literacy, above all in the digital field: Digital Literacy (Beaunoyer et al., 2020), Health Literacy (Sentell et al., 2020) and Social Media Literacy (Livingstone, 2014; Saurwein and Spencer-Smith, 2020) are some of the different types of literacy identified by social scientists as essential tools citizens may use to decode contemporary information and defend themselves against fake news, and, at the same time, reduce digital inequalities and the digital divide (Ragnedda, 2017).

Following this line of thought, Parziale and Catone discuss the results of a large study carried out in lockdown conditions in Italy during the pandemic through a web survey administered to 13,473 Italians. Recalling the theory of codes, proposed by Bernstein and in some ways connected to the Mannheimian perspective, Parziale and Catone aim to understanding whether the link between social status and cognitive style is reflected in media consumption, particularly considering the use of social media as an information source about the pandemic. Their findings suggest that less educated and unemployed people, i.e., the socially peripheral groups that respond to horizontal communication modes in line with restricted code, made greater use of social media to understand what was happening during lockdown. In other words, higher social marginality is associated with a greater propensity to collect information through social media, understood as spaces in which direct, 'immediate' communication and interaction processes are developed, based on informal conversations. In this sense, those who appear more vulnerable in terms of intellectual resources, those with a lower level of education, seem to show a greater inclination to access information obtained 'directly' from particularistic networks; that is, through relationships characterised by less distance with the interlocutor with whom it is possible to relax forms of caution and insecurity, establish relationships of trust and in a certain sense satisfy the principles of social desirability. In short, the greater propensity to find out about the pandemic through social media on the part of the most disadvantaged groups who adopt a restricted code could be associated with the direct and disintermediated nature that characterises these digital contexts, in which information comes from, is filtered and often generated—as in the case of user-generated content—directly from the user's own circle of contacts, which also explains why disadvantaged groups express a higher level of trust in social media.

The contribution by Punziano, De Falco and Trezza presents an analysis of the State-Region governance in relation to the Italian vaccination campaign, with the aim of identifying possible elements of divergence and convergence with respect to three dimensions: normative, i.e. the national campaign management plans and the individual regional plans; implementation, with respect to the allocation and distribution data of both vaccines and vaccinees; and communicative, which touches on the sphere of vaccine communication on institutional Facebook profiles. The study covering the vaccination campaign period (December 2020-June 2021) was conducted by combining the analysis of regulatory plans and the content analysis of Facebook posts. The results show an institutional scenario going in two directions. A more coherent and less divergent regulatory and implementation level is in contrast with an extremely fragmented communication context with contradictory elements between State and Regions. The latter respond to different logics, such as political (in disagreement with the government coalition) or lobbying to claim intervention priorities and—during implementation—to change the local territorial allocation of vaccines. This serves the formulation of political proposals and the restructuring of the institutional communication agenda. In this sense, the article exposes the ethical, political and governmental problems of the digital, which can no longer be understood neutrally, but as a true agent of the reality in which we live.

Finally, Dentale's article moves in a similar direction, describing how public policy makers have benefited from the analysis of institutional data made available on platforms and websites to better grasp the potential of digital approaches and the best ways to employ them to communicate with citizens, particularly in the field of education. Through the employment of sophisticated research designs, in accordance with a particular research culture, "with-and-in" the digital world, digital research necessitates the adaptable and flexible use of digital methodologies, capable of mixing and connecting both institutional aims and web data. This paper presents the preliminary findings from the research being conducted by the Department of Communication and Social Research at Sapienza University of Rome as part of the Project of Relevant National Interest titled "Evaluating School-Work Alternance: a longitudinal study in Italian upper secondary schools. At this preliminary stage, the research is exploratory, examining SWA/PTSO school projects (school years 2016/17; 2018/19), by exploring the school websites and the MIUR Platform of Alternance Histories, which contains the most successful projects developed by school networks. After downloading and analysing the selected texts, different types of projects could be identified, particular training courses being set up according to the school type, the geographical area of the school, and how far a course could influence students in their choices of future employment and further education.

Concluding remarks

Technology permeates our society and mediates most interactions with others, intellectual discourse, and formal or informal communication. Huge amounts of data, material, and information have overcome the limitations of the private realm as a result of the rapid development of technical gadgets and the widespread use of the Internet. The amount of data and information available in online situations has increased recently. From a social science study perspective, it may be claimed that interest in them is increasing rapidly since they are relevant to (nearly) everyone. Moreover, the need to create “real accounts” on social media (like Facebook, Instagram, Twitter, and others) with public identities no longer hidden by nicknames, the development of ad hoc platforms dedicated to purchasing and exchanging reviews and opinions on the goods or services bought (like Amazon, Booking, and others), and the enormous diffusion of smartphones and PCs to stay “always connected” have all contributed to changes in the way that people use new technologies.

The real-virtual divide can now be transcended in order to embrace a broader and more flexible idea of reality: a setting in which the real and the virtual are intricately linked by a stream of interlinked occurrences. We are well aware that social actions are connected to and contaminated by new digital devices, their infrastructures, and their respective uses, so social research is required to take into account, both epistemologically and methodologically, digital environments as actual contexts for socialisation, within which it is possible to measure, analyse, and study social dynamics (Marres & Gerlitz, 2016; Amaturio & Aragona, 2016). Given the aforementioned, it is easy to see how significant these new digital settings are as a source for the social sciences and, at the same time, as diverse ecosystems that are difficult to conceptualize. Addeo and Masullo (2021) concur that there is a dual awareness of digital society: on the one hand, it is unquestionably a fertile environment for new methodological experiments; on the other hand, the ongoing emergence and development of new socialisation and communication practices within digital contexts make web knowledge increasingly uncertain and revisable, at high risk of becoming obsolete. Digital data, on the other hand, are challenging and complicated, necessitating a thorough understanding of both the tools that can be used to research them as well as the Web and its infrastructures.

The “actual” world is evolving and incorporating the digital world more and more. To ensure that social research is inclusive, it is important to focus on population groups that are excluded from studies because not all nations are represented in virtual contexts in the same way. However, from an epistemological and methodological standpoint, it would be beneficial to include

communities that are currently marginalised in order to get over these digital systems' inferential constraints. Second, each nation would need to develop rules that would give consumers control over what information they shared online and awareness of the consequences of doing so. This would be a significant development for science as well as for mankind and its rights, from an ethical point of view.

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