Nethnography and Social Network Analysis for Studying Online Social Space

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ABSTRACT

This chapter contributes to the current methodological debate on digital, internet-based studies in social research. Based upon an introductive analysis of the research's perspectives, trajectories, and stages that have brought the online social spaces into social research, the chapter focuses on the advantages of combining quanti-quali approaches for approaching online complexity. In particular, the authors offer a deep discussion concerning the value, the methodological, and ethical challenges of netnography and social network analysis (SNA) methods for inquiring online social research by proposing a possible emerging methodological framework guiding further empirical studies.

INTRODUCTION

Contemporary social life, practices of everyday life, and networks increasingly diffuse and situate themselves also into digital spaces, affecting and shaping 'analogue' interactions. The pervasiveness and the embeddedness of 'virtual reality' in human experience make online sociality a growing, consistent, - and, for some extent, even the dominant – driver of people's contemporary relationships. As social researchers, it seems increasingly indispensable and timely to study how the internet changes individual and collective everyday lives, and how it challenges the understanding and the conduction of sociological, interpretative research too. Although the 'experienced sociality' and the 'studied sociality' are interconnected and mutually influenced, the chapter focuses on the opportunities and challenges posed by the internet and online data in the taken-for-granted frameworks for how naturalistic, and interpretative social research are conceptualized and then performed.

Studying internet-related social phenomena is not a new trend in the social sciences since the approaches for the investigation have changed along the technological development and the cultural significance of the internet space. Yet, several challenges of conducting internet research have triggered a strong confront among researchers from the outset.

Indeed, in addressing the question: when, and then how the online fields and data can be in the services of an interpretative sociological research work? conceptual and empirical responses did not occur without intellectual and practical concerns and neither by following a unified and common research's perspective, which clearly makes evidence of how qualitative methods "to study online social interactions are still undefined and in flux" (Addeo et al., 2020: 12). Literature helps researchers to establish the boundaries of and define the online social space, by identifying three main scenarios: online communities, communities online and primarily offline communities (Kozinets, 2002; Garcia & Standlee, 2009). Nevertheless, the definition of the method and its context of application still appears complex for qualitative scholars, whereas they "have been compelled to reconsider basic principles and practices of qualitative inquiry, with important critiques of a priori methodological certainties" (Baym & Markham, 2009: viii). This is also reflected in the gap between quantitative and qualitative scientific communities and their productions. While there have been considerable advancements and increasing interest in the use of quantitative techniques in analyzing online and social media data – including structural network analysis, web scraping, list mining and digital mapping – the qualitative strategies represent a smaller part in the scientific production.

For all these reasons considered, the chapter first discusses different theoretical and methodological directions which are being used to conceptualize and investigate the internet, by introducing some empirical works in this research landscape. For increasing awareness among under-graduated or graduated scholars, and for supporting any social researcher who wants to engage his/herself in investigating the internet, we provide an extensive and critical discussion concerning its crucial advantages and potential issues. We then outline an approach and show an empirical case for probing into socialized digital space combining netnography and social network analysis (SNA) to facilitate readers' understanding of the use of the digital space for social research.

BACKGROUND

The study of electronic communications and online networks is not new. Indeed, CMC were being examined very early in different research fields, while the studies addressing online

communities are relatively more recent. The ongoing narratives from most of the authors involved in online fieldwork (Kozinets, 2015; Murphy, 2008; Costello et al., 2017) agree in distinguishing internet's epochal mutations in two phases, defined web 1.0 and web 2.0; so, the paths of internet research evolve accordingly, either for quantitative or qualitative inquiries and across various scientific fields. Simply put, in the first phase, the internet was mostly conceptualized as a tool (Markham & Stavrova, 2016: 231) for collecting data by adopting traditional methods of questionnaires and interviews for the new medium. While the second phase depicts the internet's interactive stage, wherein people's engagement with the digital space began more active, both as distributers of internet-mediated communication and information transfer, and as producer of digital contents. Such a change in the use of the medium makes qualitative researchers likely to explore the internet as a place (Markham & Stavrova, 2016: 231) for studying individual or collective-centered online behavior, cultures, narratives, and online communities. Here, the social research brings to light different approaches by mostly adapting and extending the ethnography methodological approach – ranging from multi-sited ethnography (Marcus, 1995) to netnography (Kozinets, 2002) – where the internet is conceptualized as a very research field, likewise does ethnography in the physical, bounded space.

The most recent Internet turn – web 3.0 – has prompted the age of "mass self-communication" (Castells, 2009: 63), revealing aspects of "embedded, embodied and everyday internet" (Hine, 2016: 27), by also challenging the (social) researchers in setting methodological strategies and with theoretical, and ethical concerns. In this era of "media-saturated and ever-shifting sociocultural contexts" (Baym, & Markham, 2009: ix), where "internet users […] live with the Internet" (Castells, 2009: 64), the research scenario gets intricate, less conventional, and readable but even more worthy of interest. Consequently, qualitative social "scholars have recognized the importance of study the internet as a way of being" (Markham & Stavrova, 2016: 231), by studying how meanings and practices are negotiated, performed, and reproduced across multiple, online, and offline sites. This does not mean that today, researchers from every scientific field do studies for the internet only. Rather, it is not surprising that there is an increasing interest in approaching the internet in multiple ways within the same study (i.e., simultaneously as tool and object of analysis), or in carrying out multi-sited studies including online and offline people and organizations' practices.

To date online phenomena and communities have gained popularity worldwide, across multiple disciplinary fields. An expanding niche of study in the marketing and business domain, is

represented by those studies on tourism, due to the presence of recent but numerous virtual, digital, studies, deriving from the benefits of the massive use of web platforms among tourists (Thanha & Kirova, 2018). Socio- economic studies addressing the widespread practices based on sharing economy services (Bardhi & Eckhardt, 2012; Buhalis et al., 2020) and financial studies targeting crypto market communities and cyber finance exponential development (Maddox, 2020) are other significant examples. Furthermore, internet-based communication and social media-based platforms have considerably challenged studies relating to education, by arguing about the 'situatedness' of literacy practices on the internet and offline settings (Leander & Mckim, 2003; Landri, 2013), and medicine, claiming, for instance, the emergence of an online typology of communities of practices (oCoPs) where people create and disseminate medical knowledge (Roland et al., 2017). Lastly, the e-governance topic within political sciences exemplifies the growing interest concerning the governments' use of internet-based channels and platforms to achieve public goals or simply for promoting information, supporting political communication and collect feedbacks (Leone & Delli Paoli, 2017); while the studies of online fake news and misinformation have been recently published as examples of digital, social media-based journalism (Ncube, 2019).

By moving further the scope and the extensive application of internet-based research approaches across multiple scientific domains, in the following, we present some selected social science studies claiming to apply a predominant qualitative-oriented, naturalistic (mostly an online adaptation from traditional ethnography) approach to the internet to empirically connect the readers to the three-macro research perspective discussed above (the internet as a tool, as a place, as a way of being). The studies are the sample of the literature review's sample, which have been purposely chosen for exploring different ways of giving meaning to the online field and informing the readers about different approaches to the Internet. Moreover, our studies' analysis does not focus on their outcomes, but instead, they serve the purpose of identifying the key concepts supporting internet study in social sciences and its challenges.

Social research online has initially been intended to test out the effects of communication technologies, and later a more naturalistic approach to online social practices has been applied (Addeo et al., 2020: 12). This chapter focuses on the latter line of discussion. Although in a nonexclusive way, (various, and differently named) ethnographic approaches appear to be the most frequent methodological choice for adequately understanding social phenomena online, by adopting a naturalistic perspective. Nevertheless, because of a multifaceted understanding of the internet it is difficult to find a shared conceptualization cutting across the social

researchers' internet-based studies, and consequently the academic community is teeming with various and sometimes overlapping research approaches, ranging from "electronic ethnography" (Waskul & Douglass, 1996) to "netnography" (Kozinets, 2002).

In 1997, Barbara Sharf published a study regarding an *online diseased-focused discussion group* for people with concerns about breast cancer – the Breast Cancer List –. By means of participant observation and discourse analysis, the study provides an in-depth examination of the online group's communication and interaction having as main purposes to describe "the disembodied community that has coalesced through membership on the List", or the community's constituents, the quality of the recurring contents and its function for the members (Sharf, 1997: 66). At the publication time, the scientific debate has been wondering about the (un)effective development of personal relationships and the illusion of the community's constitution in online environments. As a counterbalance to those critic visions, her study is an empirical example showing both the reproducible and irreproducible aspects of online communities in comparison with face-to-face support groups, by giving to the former even greater and unique quality appreciation regarding online community's function enhancing members' empowerment and actions also outside the List.

Nancy Baym's 2007 study about the Swedish independent music fans' multinational online community is an interesting case of a *new form of online community* – that of music fans – where the peculiarity is represented by the community's building process throughout a network of sites and many places on the Internet and off. The main points which warrant researchers' attention are multiple, among which the most interesting according to us is the "networked collectivism" concept (Baym, 2007). It is depicted as an online form dwelling "in neither the site-based communities of interest […] nor in the individualized social networking spaces" (Baym, 2007). Indeed, the Swedish independent music fans are socially organized across a multitude of web sites and social platforms, and such community's ecosystem is built up through different online and offline practices engaging the community's members. Running the risk of simplification, the study appears remarkable for our learning purposes since it gives light to new, and increasingly common online social formation which, due to its features, poses methodological and practical issues to us researchers for its navigation.

The 2009 Horne and Wiggins' study of suicidal behaviors and identity online is also interesting regarding both its intent and research's technique for analyzing data. Indeed, the author choose to investigate suicidal posts and messages in two online, openly accessible, and frequently used

online forums to describe the interactions among those who opens a thread by posting the initial message and the related replies. The intent is to examine "how participants built up an authentic identity of being suicidal […] and how replies attended to the immediacy or authenticity of other user's claims." (Horne & Wiggins, 2009: 173). Therefore, the textual data, collected based on online interaction, are analyzed using discursive psychology which prioritizes the participants' "action orientation of discourse" and thus, the situated interaction in a particular context – in this case, online. This online study exemplifies two of the greatest benefits deriving from online data and social research online: first, the remarkable opportunity to study real time events, conversations, and practices; and second, the easier approach to those stigmatized social groups of people or to those particularly sensitive topics or stereotyped dynamics which otherwise are more difficult to research face-to-face. Furthermore, this reflection allows us to connect it to another advantage of studying individual online presence, namely that of avoiding misunderstanding and misrepresentation of research participants and social phenomena under study.

Italian scholars have also published a very interesting study on online narratives about motherhood (Cossetta & Caliandro, 2013), in order to build a situated knowledge of Italian consumer mothers' online self-narratives when they refer to the 'Chicco' brand. By applying a crawling software, a total of 13.796 data have been mined and then qualitatively analyzed according to macro and micro codes for finally developing four analytical categories (*stilemi*), representing woman's recurring narratives. Here, the study's value relies on its scope of reconstructing an online, socially shared cultural system or imaginary – that of Italian maternal consumers, in the specific study.

Finally, the 2020 netnographic study aiming at exploring the link between responsible leadership and community engagement in India during the Covid-19 pandemic, is worthy. The authors state to adopt netnography following all the steps envisaged by the method (see Kozinets, 2002). In doing so, they define the data collected as "extant" material, represented by 2124 comments relating to different leadership, pandemic and community engagement posted on Facebook, Yahoo and other online forum discussions (Mehta et al., 2020). Subsequently the dataset is thematically analyzed, by developing similar codes which are then grouped in themes. This study distinguishes not only for its relevant, contemporary topic but also for exemplifying both the forcefulness of online setting and interactions in shaping the functioning of community in physical boundaries (and vice versa); and the internet malleable adaptability as research tool and place.

By reviewing different online settings and research strategies, we illustrate how the empirical realities vary, more than even an accurate metanalysis can elaborate, making evidence on the different conceptualization of the internet's role based on researcher's own philosophical stances, and specific research question and design. Moreover, in outlining the methodological grounds and deviations, we provide a generic picture of the research strategies of online investigation during fieldwork, so that we then open the discussion regarding both our methodological proposal, and the main internet-related controversies within the social science field.

DOING SOCIAL RESEARCH TO AND FOR THE INTERNET

Online SNA and Ethnographic Methodological Development

Doing social research on online phenomena, and practices might differ regarding its context of application, the definition of research questions and method. If we exclude digital methods applying crawling tools like web scraping and APIs, the social network analysis (SNA) and some differently named ethnographic approaches, appear to be the most established naturalistic strategies for the internet investigation. This is not surprising at all, but, by contrast, completely understandable and semantically coherent. Indeed, in the daily, popular discourse, people usually refer to the internet as an environment, as a space, whether it is defined cyber-, web-, online-, or digital-, with less or more defined edges; and refer to the online community as 'unit of measurement', especially in relation to the online social networks. The formation of such communities might allow researchers to underly the structure of those networks, made of nodes and different ties or might develop descriptions and meanings of interactions and practices in the online environment; just as the ethnography and the SNA do 'offline'.

While social network analysis focuses on the development and use of statistical methods to map relations among participants in online communities, netnography emphasis mostly on the use of qualitative strategies to understand (online) communities. If CMC before and the rapid proliferation of different types of online social media platforms later, have driven a revolution in research interest within SNA and have expanded its application (Rheingold, 1993; Welser et al., 2007; Gruzd, & Haythornthwaite, 2011), netnography is an ethnographic practice purposively developed for investigating cybercultures (Kozinets, 2002; 2010; 2015).

Nowadays, the combination of technological progress and research development, allows social researchers to approach multiple online data sources and the online social space more broadly. It is indeed possible carrying out new online studies within already explored domain or media-

related phenomena like that known as ‘homophily’, which turns attention to how the use of online social spaces lead individuals to one-sided information (McPherson, Smith-Lovin & Cook, 2001), or another known as ‘echo chambers’ stressing out the role of algorithms of the social media outlets (Sasahara et al., 2021).

Combining SNA and Netnographic Approaches for Online Data Collection

We have previously problematized the online research fieldwork, while here we outline our methodological perspective dealing with the ambition to combine SNA and netnography to study online social spaces. However, in justifying such methodological decision we do not elaborate on the epistemological, and ontological underpinnings – which are beyond the scope of this chapter.

“The online context” is no longer a cyberspace, but conversely, it is made by complex and multifaceted ground(s), which recursively affect and are affected by offline practices. As such, a combination of two research strategies provides more nuanced understanding. Although SNA and netnography can be used as stand-alone method to study online spaces, combining them provide strong results. In introducing our methodological proposal, we must declare and clarify our value of:

- Internet as → an (emerging) field site, as ground for research, rather than a tool for collecting data.
- Social Network Analysis as → a scientific method to map individuals and their interactions and relations in the network.
- Netnography as → a user-centered, qualitative, interpretive research methodology to approach personal, interpersonal, and collective (inter)actions on the internet. We agree in conceiving it as a “non-media-centric approach”, whereas the focus of research is “in the cultures, experiences, activities and relationships developed through different media” (Addeo et al., 2020: 11). In our perspective, it can overcome some limitations of both quantitative techniques and vis-à-vis qualitative research method too.

By framing a multi-method strategy for inquiring the digital space, we neither argue for conceptual nor empirical prioritizing over the physical research setting, mostly because we do not believe in their opposition (offline – online; virtual – physical), rather we see a society wherein web platforms and social media are constitutive part of everyday life and experiences. Consequently, qualitative social researchers should try to enlighten the online traces, whereas

they represent something for the phenomenon under study. But why and how should a social researcher strategically combine SNA and netnographic methods?

Social network analysis is a research strategy that aims to understand a group of people by mapping the relationships that connect them (Wasserman & Faust, 1994). Thus, not only are people, ideas, concepts and things are increasingly connected; the form of these relationships can tell us a lot about many phenomena in our social world that challenge traditional explanations (Marin & Wellman, 2011). The emphasis on relations allows for a study of how the interaction between individuals, organizations or other social entities gives rise to larger-scale patterns that facilitate and constrain individual actors' behaviors (Hevey, 2018; Scott, 2017). SNA uses several measures to model network processes. A useful measure of SNA for inclusive urban development is the amount of centrality in a network, which helps determine the importance of nodes (actors) (Hanneman & Riddle, 2005). Network centrality refers to an individual actor's reputation in the context of all the other connections between other actors in the network (Knoke & Yang, 2019). SNA makes use of a variety of centrality indices able to identify and characterize differences between essential and less essential nodes (Wasserman & Faust, 1994). Among the centrality measures, the most relevant here are the 'degree', 'betweenness' and 'closeness'. With these centrality measures, SNA allows us to identify which actors are prestigious in the network, which are central (the most connected in the networks) and which are peripheral to the networks (Scott, 2017; Wasserman & Faust, 1994). Since a node's position determines its opportunities (Borgatti et al., 2009), the highly prestigious node usually contains the highest amount of information since most nodes reference it directly or indirectly. Actors that appear peripheral to the networks have less to no influence since they hold less information that could be shared within the network. The network analyst can start by looking at the nodes to get structural information about the network or start the other way round by analyzing the structure to identify "hidden key players" in the network.

The promising methodological elements of ethnography and SNA appear even greater when applied to online research. SNA techniques have been applied to a variety of social phenomena to successfully uncover some social interactions, connections, and relationships not seen with any other traditional method. Indeed, SNA is used to achieve an understanding of subjects based on their position in a network, in contrast to other methods where understanding is often based on internal attributes of the subjects (Borgatti et al., 2018). To collect data for social network research, researchers usually employ surveys, interviews, participant observations and archival records. Within social network analysis are a host of analytic techniques ranging from

simple centrality scores to sophisticated multilevel modelling; however, gathering these networks is a time intensive and challenging task (Wasserman & Faust, 1994). It is immediately clear, to what extent, evolving digital tools and social media networks present new research opportunities. Indeed, even the simplest tool of e-mails or mailing lists – which are conceived as passive networks – can provide researchers with rich sources of information for network analysis (Hogan, 2017). Moreover, digital technologies allow researchers to collect data on events connecting actors with unprecedented volume and granularity. Most popular are the use of APIs and web scrapping for collecting data using R or Python, two of the most popular software for collecting and analyzing not only social network data, but also other statistical analysis. Finally, the increasing use of internet in the forms of social networking platforms with their more and more sophisticated functions and the availability of timestamped interaction data offers rigorous ways to operationalize classic social network concepts such as tie strength (Kitts & Quintane, 2020:74).

Conversely, netnography does not have a story behind and without being associated to the societal role of internet. Indeed, it "offers a specific set of analytic approaches and processes applicable across a spectrum of online involvement" (Costello, 2017: 2), As the label suggests, it is a conceptual and methodological extension of the ethnographic approach. Therefore, the fieldwork is informed by qualitative methods and adapts ethnographic research techniques – which are perfectly synthesized in "immersive depth, prolonged engagement, researcher identification, and persistent conversations" (Kurikko & Tuominen, 2012: 13) – to the study of online communications and communities. In accomplishing understanding and thick descriptions of social and cultural patterns in online interactions, netnographers usually prioritize quality over quantity, but still also large-scale surveys can be pursued, or digital methods can be incorporated like "data science and analytics, visualization methods, social media research presence and videography" (Kozinets, 2015: 3). As showed in the background section, netnographers deal with both synchronous or asynchronous online traces, and thus the research material analyzed is predominantly textual – whether it is archival, produced, or co-produced by participants and researcher, or researcher's notes – but might include other sources of data such as images and videos. Nevertheless, if the flexibility of the ethnographic method makes it suitable for the study of the internet, the discussion around its ambitions and appropriateness for the online contexts is still heated. Although the roots of netnography and its position within the social sciences are clear, it is underused compared to other research techniques, both more traditional or innovative; and researchers confront themselves with other

methodological terms like multimodal ethnography (Dicks et al., 2006), digital ethnography (Murthy, 2008), mediating ethnography (Beaulieu, 2004), connective ethnography (Hine, 2015) and online ethnography (Gobo & Cellini, 2020), to name but a few. In this regard, we do agree in claiming that the acceptance and the deployment of netnography as a qualitative method in social sciences, "may reveal more about the knowledge and experiences of individual researchers than about the methodology itself" (Costello, 2017: 3).

SNA techniques adequately paired with netnography provides several complementary benefits to the study of online spaces and interactions, in terms of collecting multiple data points, and ensuring comprehensive understanding and interpretation of the phenomenon under study. In fact, social network analysis helps to identify "bounded social networks for netnographers to engage with and investigate" (Kozinets 2015: 63). Since online data can be stored and traced with time, it is suitable for the study of dynamic networks especially in combination with netnographic methods that enable the researcher to follow research participants in their community. The qualitative analysis can help to reveal how people perceive the network, and the content and meaning of ties and identification of "influential ones in a network" (Kozinets 2015: 64) essential to understanding network patterns and measures. This can also help to capture the 'insider' view of the network, which mixed with quantitative network measures, it creates a complete picture. The application of netnography and blending of social network analysis therefore presents new opportunities for collection, analysis, and interpretation of data. The qualitative methods of participant observation, network mapping, and interviews can blend with each other to inform and support the online data collection.

An Empirical Example

We describe here an empirical case to make our methodological proposal concrete.

We have deliberately chosen this object of study and then, we have drafted the research design to inquire it. Yet, such an example does not constitute a case study in action, but rather a possible research project to develop. Therefore, in outlining this research design, we show why and how combining SNA and netnography into a broader sociological study of online social spaces.

Our example deals with the so-called multi-level marketing business (MLM), which has changed over time with social media, transforming its workers from the former door-to-door sellers to digital entrepreneurs. The paradigm at the basis of this business model is made of a division of distribution via small networks, and structured hierarchy within and outside each

distribution network. Regardless of the core product they sell, and the thin line that separates the legality of these businesses from possible scams, thousands of people – mostly women, and in general those individuals excluded from traditional jobs – are 'self-employed' in one of the various companies within this business worldwide (Avon, Vorwerk, etc..). Beside the main task of selling products, what makes it multi-level is the recruiting activity, aimed to find new people to work for your network. Both the job tasks are carried out through daily, incessant social media advertising posted on their own personal pages, trying to appeal more clients and sellers mostly by portraying the ideal of female empowerment and financial independence combined with homeworking and luxury lifestyle.

Even though briefly presented, it appears clear why such MLM business, social, digital phenomenon represent a convenient case to discuss our methodological proposal. Dozens of research questions might emerge but let us say that we are interested in mapping and describing how one of the small distribution networks selling weight-loss products is formed and expresses. For making the selection process easier, we decide to focus on ARIIX commercial brand, and specifically its Italian market. Then, according to the second netnographic procedure step – establishing entrée – (Kozinets, 2002), the researcher must locate and define the online field, object of study. One might decide to follow an #hastagh, another to focus on an online singular group or forum, or plural sites. Our empirical choice here origins from one of the author's old digital memberships to the Facebook group 'PLANET THE BEAUTY RULES – Gruppo Ufficiale' gathering Italian clients and sellers of the ARIIX business. The group has been created since 2014, and to date counts more than 35.000 members. It is private, but visible on Facebook, which means that anyone can find the group and ask to join it because it is supposed to gather actual and potential clients and sellers. Whatever online reality a researcher chooses to study, if the group is particularly active, showing a high frequency of posting activities, in few weeks, through a series of lurking observations to it, he/she will be engaged with a considerable production of data made of writing and photographic posts, reactions, and comments. All these insights will provide the researcher a consistent raw data set to be analyzed for describing the culture shared by that online community and understanding its dynamic functioning. Moreover, while the netnographic observation proceeds, the researcher might easily distinguish insiders and new members, encultured and outsiders one and, by identifying a key community's member, an ego-centered social network analysis might start. Establishing a first node of the network (the ego) might allow the researcher to track and reconstruct the 'alters', or the persons directly connected to the ego, which in the specific case of our example,

might constitute one distribution network of the MLM business. Indeed, the advantage of mapping and observing the online network in action lies in the possibility to grasp both structural and relational components – at least the most superficial – made them possible by the social platform itself through reaction and interaction options, which in the final analysis, are non-inducted by the researcher.

About the Methodological and Ethical Complexity of Online Data

Despite the incredibly valuable opportunities for researchers that the internet's characteristics offer in terms of source of data, qualitative scholars in social sciences have raised some methodological challenging questions and ethical dilemmas in approaching online environments. The major resistances opposed concern both methodological practices such as field definition, negotiation, and access to it, the nature of research relationship and researcher's practices; and ethical considerations of data usability, participants' (data) privacy and anonymity protection and informed consent. They all seem to be the other side of the coin of the netnographic advantages described by Kozinets (2002), and sustained by many other scholars (Costello et al., 2017; Addeo et al., 2020). Tones of authors have excellently reviewed the ethical problems of online research (Elgesem, 2002; Waskul & Douglass, 1996; Watson et al., 2007; Stevens et al., 2015; Eynon et al., 2017) and there seems to be a conventional wisdom in considering both traditional and special ethical issues that confront the online researcher. No one single set of guidelines can cover all ethical issues concerning online social spaces (Watson, Jones, & Burns, 2007), mainly because there is too much diversity across internet cultures, values and modes of operation. In the following sections we scratch the surface of the most concerning methodological and ethical issues when conducting research in online social spaces.

Online Research Participation and the Role of Researcher

If the unobtrusive nature of researcher's presence is one of the greatest methodological benefits of netnography, an objection to accepting it as such refers to the online researchers' not physically co-presence with their research subjects, so that "they cannot use their personal skills to access and interpret the social worlds they are studying" (Garcia et al., 2009: 53). Moreover, when combined with the monitoring of naturally occurring online interactions, the role of researcher appears to some ambiguous and critical. From one hand, such researcher's peculiar physically invisible presence – that in the literature is defined as 'covert access or lurking' (Addeo et al., 2020), or 'voyeuristic' (Kozinets, 2015) – allows continuing access to

informants without time and costs contractions and ensure freedom from researcher bias; while on the other hand, it appears "to threaten the premise upon which netnographic methodology retains its qualitative rigor" (Costello, 2017: 7). Although a researcher's active engagement in the chosen research online setting is not always eligible nor appropriate, we agree in recognizing the distinctive characteristic of a passive and a participatory approach to the online context, by categorizing the latter as a netnographic experience, while associating the former as archival research of online textual data (Costello, 2017). In this online 'being there' regard, the literature shows a variety of perspectives and ethics, ranging from studies adopting a completely passive stance (Kozinets, 2002) to studies advocating immersivity and active participation to the research's subject (Sharf, 1997). As sustained by some authors (Hine, 2000; Beaulieu, 2004) the instrumental stance and consequences of lurking are problematic to participants and also identify the researcher as an "ideal observer […] to whom all is accessible, without needing to enact a subject position" (Beaulieu, 2004: 147). The discussion is unsolved and could get even more complicated if we add the constitutive trait of online information or data, namely the persistency and the spontaneity (Boyd, 2011).

Within the context of innovative market and management research, netnography is an effective method to identify latent needs and wishes, 'lead users' in consumers good settings, and to obtain insights from them to inform new marketing or management strategies and actions (Kozinets, 2002). It also appears ideal in assisting the study of stigmatic phenomena or situations within those online communities "supporting marginalized, at risk, and anonymity-seeking groups" of people (Costello et al., 2017: 3), as we have shown previously. However, the social researcher must be aware of the possible exclusion and selection bias when studying online spaces and people's interaction. Indeed, there is an extensive literature discussing the divisions and exclusions created by the information society. The phenomenon called 'the digital divide' or 'digital stratification' (Murphy, 2008: 848) has important implications for social research, whereas online spaces can be limited to certain, more advantaged, groups of people, while some low-income, older people, and people living in rural or underdeveloped areas are often unable to fully participate in the online social spaces, and thus remain digitally excluded. There is the need for researchers to recognize that while the internet enables and provides spaces for some people to fully participate in online communities, it also excludes others from participation in such. When studying online environments, there is the likelihood that we will miss people who might not want (or unable) to participate in online activities. In social research, the selection of participants is expected to be impartial and unbiased, and any risks

and benefits must be justly distributed. This concept is challenging to apply in online contexts, in which populations are often self-selected and can be exclusive, depending on membership and access status.

Furthermore, in terms of biases in the selection of online participants, two issues that are important to consider are: anonymity of self and interaction, and multiple identities. The two might go hand in hand and in both cases, they represent a situationally modifiable condition. Presenting a self in the online context is possible in various unlimited forms and degrees. We agree in defining anonymity as a condition "mediated between participants in the course of interaction as a variable element of the on-line situation" (Waskul & Douglass, 1996: 134). In fact, anonymity is not a given state of being, but instead, it should be described as an individual, context-mediated performance. As pointed out by Waskul and Douglass, "degrees of anonymity are as varied as the reasons that people engage one another on-line, and the forums of such interactions" (1996: 134). Moreover, many people have multiple identities online and it is difficult to link respondents to their demographic and social characteristics. Due to the use of pseudonyms and multiple identities in online spaces, it is generally difficult to verify respondents' demographic characteristics such as age, gender, level of education and other important social demographic characteristics. This is a missing piece in most social network research because it is expected that individuals' social characteristics influence their behavior and as such if we are missing these data, we are likely to come to conclusions that do not reflect the social situation we are studying. Lastly, the social researcher must be aware of the possible presence of bot into the online spaces, which are often used to perform automated operations of interaction with social media groups or profiles. Such automated agents create "fake" (non-human) interactions, by participating in online interactions through reactions and comments.

Field Definition, and Access, and Data Negotiation

Internet-mediated communication and all the digital devices available extend peer-to-peer but also institutions to citizens relationships over time and physical spaces, by creating conditions for continuous and unbounded interactions. Because of such a special condition, many scholars have debated for a very long time about the traditional naturalistic research practice in a spatially and temporally defined context, and the research practices carried out for borderless online worlds. However, the pure distinction between off-line and on-line worlds appears to us conceptually cogent, outdated and therefore inadequate to capture a holistic picture of the

studied types of community, society, or culture. If, this distinction could have been valuable in the past, the debate around the 'right way' for bounding virtual locations and online communities is even more problematic nowadays. Moreover, another challenging element to consider when approaching online spaces, is the conception and the substance of the public and private spheres and its knotty profile. Indeed, the private and public spheres overlap and must be reconsider in a more complex way in the digital space, where our perceptions of them can be blurred and individually, contextually defined. We agree in conceptualizing on-line interaction as both public and private, in the sense that "it is situated in a context that is 'publicly private' and 'privately public' (Waskul & Douglass, 1996: 131). This results in a conceptually and experientially insignificance of discussing such a matter in a priori theoretical terms, whereas, instead, in the cyberspace the dichotomy of public and private domains refers to the situated, subjectively defined experience of participants.

In terms of (social) research to online social spaces, indeed, it appears more convenient to codify and interpret traditional terms differently, synthesizing and giving adequate attention to the different, unique patterns of online interaction and action. However, researchers should not ignore the ethical implications of their work simply because the data they used is available online and seemingly public. This is a paradoxical effect of CMC: despite the public exposure warning, e-mail, chatting, and posting are perceived as private or quasi-private act (Sharf, 1999: 246). Although, very often, participants in an online community do not expect their data to be used in research, researchers cannot oversimplify the public versus private dichotomy in absolute terms, or just in terms of data accessibility. Conversely, the researchers must distinguish "what is 'publicly accessible' and 'publicly distributed'" (Waskul & Douglass, 1996: 129) in the realm of cyberspace. In most instances, participants assume their data to be private but, they are probably accessible to anyone with internet access and could therefore be viewed as being in the public domain. Therefore, even if the data is freely accessible online, "researchers must consider the socially defined sense of privacy as perceived by the participant, as well as the group in which the interaction occurs" (Waskul & Douglass, 1996: 133), in order to respect and protect participants' perception and perhaps obtain consent before using those data.

Participants' Consent, Privacy Protection and Data Usability

The emergence of the internet as both a tool and a venue for research has introduced challenges to this traditional approach to informed consent (Eynon et al., 2017). Although for some, and

under many circumstances, CMC is a public medium (Sharf, 1999), and the internet is considered a public space and, therefore, public behavior does not necessarily require informed consent (Salganik, 2018), most of the scholars claim the opposite. Obtaining informed consent online may involve the researcher posting to communities, or individually contacting users and providing them with participant information sheets and consent forms to sign. There are practical difficulties involved in obtaining informed consent from all members of online communities. Even if a researcher posts a message in an online post, not everyone may see posts, and some members leave but their contributions remain visible. Langford (1996) suggests that researchers wishing to conduct analysis of posts and archives should consult the terms of electronic forums, which may openly request that research should not be carried out. Where clear directives do not exist, it may be possible to contact the group moderator and gain permission to conduct research, but clearly moderator permission cannot be viewed as consent by all members of the group. Whether consent needs to be obtained from individual contributors or from moderators is fraught with uncertainty. Informed consent becomes more problematic when researchers have to consider new members joining the group later than he did. Indeed, all the online groups, communities, or even personal networks are in flux and evolve overtime, in both directions of expansion and restriction. As clearly pointed out, "the reality of multiple and simultaneous form of on-line interaction often renders obtaining informed consent a practical impossibility" (Waskul & Douglass, 1996: 136). Other issues to be consider, that stem directly from the informed consent, is that of research participants' privacy, anonymity, and confidentiality protection. Although behind (most, but unfortunately not all of the) sharing activities via internet there is a choice also of assuming some risk in how such information will be used by third party, ethics guidelines stipulate that individual should not be identified, and their privacy should be respected. The researcher must exercise due care and assume personal responsibility for safeguarding the integrity and interests of the individual, including the respect for privacy (Salganik, 2018) in terms of participants' data collection, use and disclosure (Elgesem, 1996). Typically, to ensure anonymity, researchers would hide the names of respondents and their identity. However, unlike conventional studies, in online research, the data is available online and with enough of the context is known, it is possible that the identity of the individuals in the study could be determined. Indeed, with traditional forms of research, it is generally straightforward to anonymize data so that research participants cannot be identified. When working with data in the online social space, however, anonymizing data is more complex – anonymization procedures are still evolving for aggregated or big data, and it is difficult to anonymize individual data extracts when these are reproduced in

publications and during presentations (Narayanan & Shmatikov, 2008). Although complete anonymity may be difficult to ensure, it is advised to remove all identifying data prior to publication and, where an individual is identifiable, that explicit consent is required before publication.

Finally, one dimension to the concern with research participants that research ethics guidelines do not necessarily consider is the reactions of participants to the revelation of details about their lives and interrelations in a social report. This is not so much the lack of privacy or confidentiality, but rather the overall interpretation of the findings that comes from the use of their data. This is a problem for all social science research, but it may be especially a problem when informal structures are revealed about participants that they were not expecting. Protecting the identity of unsuspecting participants becomes even more crucial when the data accessed refers to sensitive subject matter, particularly when exposing such data in new contexts and to new audiences may place the online participants at potential risk. Regardless of the strategy adopted, all research must be guided by ethical principles that will ensure that research respondents are not put in harm's way. The onus remains on the researcher to manage potential harm and risk to individuals and groups when conducting research but applying traditional ethical guidelines to online research will not work well in practice. In reflecting on the ethical issues, researchers should try to balance it with the theoretical and methodological considerations so that they produce robust and useful results at the same time safeguarding and protecting research participants.

SOLUTIONS AND RECOMMENDATIONS

Would they be digitalized or born digital traces, online data could play an important role in the study of social life. However, the internet is such a vast universe that there is a lot of data to be collected and sort out and is researchers' responsibility to decide which ones are relevant and which are not. Once determining how and to what extend such material can be used in describing phenomenon under study, social researchers will deal with inherent practical, methodological, and ethical problems and biases.

We do agree in considering online research an emerging field in the realm of social sciences, and as such, there are not many established studies so far. By following the premises of social constant changing, we also consider social researching as a situated and reflexive practice,

mostly and particularly when it comes to inquiring online environment. Therefore, we include the following recommendations for social researchers dealing with online data.

At the methodological level, researchers have the possibility to apply almost all the research strategies applied to the study of physical social settings and offline phenomena. However, online data scholars would like to collect are often incomplete or altogether inaccessible; and when they appear collectible, their validity and representativeness must be considered and constructively overcome. Researchers should engage in careful data sampling to ensure that population of interest are being uniformly represented in our data to avoid making bias conclusions. Moreover, in most online environments, it is easy for people to hide their true social characteristics which could affect how we interpret our data. This can also lead to excluding some participants that might have important implications for our research. That is why, the combination of methods appears to us the most suitable choice, also justified by the necessity to deal effectively with the full richness of the real world. But, as with many methodological issues, there is no easy work-around for this. As a rule, researchers need to reflect more and lessen the impact of such omission in their research through balancing different viewpoints from different groups of people.

At the ethical level, researchers should engage in case-based evaluation, balancing following general guidelines and facing the specific research process; and protecting participants' rights and producing rigorous results. We do encourage social researchers to pursue a micro-ethical conduct, by reflecting about the breadth of potential and real issues, either before, during or after the fieldwork. Above all, researchers must be aware that the use of online spaces for research presents problems regarding privacy, and data protection. Indeed, although people might share information in online social spaces, they may do so without the intent of it being used for research. Informing these individuals and agreeing with them on how best to present their ideas will go a long way to attune for the problems that might arise later. Finally, trolling and blurring of boundaries between commercial and academic research are potential sources of trouble too that academic should be aware of.

At the practical level, there is the need for constant adjustments. The fluidity of the internet means that the methods and techniques suggested to study it are also in flux. This also calls for researchers to acquire new competencies that can help them to handle data produced in the online environment (i.e. the use of software, or some coding knowledge). There is also another element to consider that is transversally relevant to the online-related methodological, ethical,

and practical debate: the media effects. Researchers, indeed, need to acknowledge that individual online actions, interactions, and reactions might be influenced by several and different media effects, exposing researcher activity of collecting and producing data even more challenging. To be further clear, in this context, we are not referring to media effects in terms of positive or negative impact of digital media on society but, instead, we refer to those digital platforms' manifestations or features which define how they function and how users can interact with others.

To conclude, the practicality of researching online social spaces varies by project and should be justified substantively because there are few heuristics for appropriate practices. There are no established ways of dealing with phenomena and research issues and we do not even know the magnitude of the issues that are posed to researchers as we use online data to understand social life. As a result, we have to device new ways of solving these problems as they emanate. As a rule, we invite social researchers to reflect and thus adopt an attitude towards online data empowerment, rather than data exploitation.

FUTURE RESEARCH DIRECTIONS

Social researchers are always in a subtle but intriguing position. We, indeed, work for understanding and describing transforming and transformative societies. Therefore, we simultaneously must keep a focus on the past – where we were – and on the future – where we are going and how –. In this sense, we, as social researchers, must adapt our research journey to ever-evolving societal transformation without fears and paralyzing concerns, otherwise the social research relevance deteriorates. The digital network is pervaded with data that should be exploited by social scientists to understand a variety of social phenomena. As a sign of the evolution of the medium and its use, the internet is becoming a *way of being* (Markham & Stavrova, 2016: 241), even more embedded and intertwined with face-to-face interactions for a large amount of individual (Hine, 2016) and incorporated into social researchers' everyday practices (Garcia et al., 2009).

Therefore, it will be important to convincingly demonstrate how is crucial to conduct qualitative research considering online spaces, interactions, and traces, given the complex but almost real online societal formations. Further qualitative, multi, or mixed method investigations under any broader research approach inquiring, regarding, for instance, the (re)production of personal identities and phenomena- centered narratives, the transformative

role of collective narratives in cultural, political, and social changes, and the construction of new gender-related myths and stereotypes through social media appears a vitally relevant contribution. Finally, nowadays, the overall idea of "small data" is gradually evolving within the academic field (Martin Lindstrom, 2016) and the world of journalism (Forbes, 2016; The Guardian, 2016), giving greater significance to the 'footprints' left by people's digital media use that build 'digital traces'. In this regard, by also lifting the avatar concept – in substitution of recognizable individuals – a future post-demographic approach in social sciences is unveiled, passing over the subjects' social-demographics properties while also focusing on "users' relations, networks and social practices" (Padricelli et al., 2020: 8). From the closest netnographic and qualitative perspective of online social research, the debate has consistently evolved, by enriching its premises, intentions, and potential. We refer and we recommend readers to inspect the latest contributions in the methodological development of netnography: auto-netnography, social media monitoring dashboards, and more-than-human netnography (Kozinets et al., 2018).

CONCLUSION

This chapter provides a conceptual overview on 'why and how the online field can be in the service of a sociological research work?'. In doing so, we have first illustrated significant examples of research design suitable for addressing the online social space. We, indeed, accepted the Murthy's critic and alarm to the sociological community, which, despite all the evolution in terms of range of research practices, modern CMC devices and internet-mediated social activities, in the most empirical cases "continues to be delimited to traditional physical configurations" (Murthy, 2008: 849). We argue that, if the valuable and fruitful contribution of social research is to understand individuals, organizations, and societies' "life as lived", so consequently, as social researcher we should not avoid the online traces, whether they are digitalized or born digital material. We, as social researchers are not alone in the realm of online studies. Indeed, in information technology, marketing and organizational research, scholars have increasingly studied how to frame the "big data" as an automatic flow of information deriving from internet-based digital platforms for predicting trends, profiling people and their experiences, and for targeting products and marketing campaigns.

Today the relevance of processing and analyzing digital interactions appears to us unequivocal for the purposes of the sociological research in its every sub-field. In fact, the multiplication of digital spaces in different forms, the quantity and quality of data produced by people and institutions through the internet – datafication – represent a significant societal change, which transforms social experiences and practices, and consequently the (qualitative) sociological research. In recognizing the "embedded, embodied and everyday Internet" (Hine, 2016) contemporary social experience, we do not mean to entirely shift ethno-methodological approaches within the internet, but instead, we are oriented towards "understanding the Internet as a significant element in the constitution of what contemporary society is and can be" (Hine, 2016: 27), and "as a source of methods instead that a mere object of analysis" (Addeo et al., 2020: 33). The chapter has purposively chosen some empirical examples to present how different online studies are conceptualized and look like across multiple scientific fields. More emphasis, however, has been devoted to research addressing specific online contexts, or practices within the sociological domain.

Social network analysis and various ethnographic approaches adapted to online inquires – ranging from virtual ethnography to netnography, either pure or blended (Kozinets, 2010) – define the most embarked methodological directions by worldwide scholars. The analysis of previous online research has demonstrated significant additional and valuable benefits in codifying the internet as a place of and for research. Nevertheless, along the way of online research, further complexities come to the fore, either methodological or ethical. In preparing the readers to this, we discussed possible participants' selecting bias, and other warning dynamics regarding field access, researcher's presence and relationship with participants, and data collection, by however highlighting the review and application of case-based ethical decisions.

Lastly, our specific contribution outlines a methodological proposal for acknowledging the online traces as relevant research material informing social phenomena under study. The methodological framework proposed here is not particularly novel itself, given the proliferations of studies which did and still do apply alternatively or simultaneously (visual)SNA and netnography for studying online phenomena. Yet, in our perspective, the application of multi methods is recommended for contemporary internet-based qualitative research. Consequently, the case example aims to describe a research design, which data collection strategy results is a blend of two research methods – SNA and netnography.

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KEY TERMS AND DEFINITIONS

Multi-Method: Is a research data collection strategy justified by the collection of multiple types of qualitative and/or quantitative data. Multi-method choice can be from a singular research paradigm or from different paradigms.

Netnography: Is an interpretative ethnographic research methodology for inquiring online communities and communications. It is defined by a set of steps and practices concerning fieldwork entrée, data collection and analysis, and by guidelines for ensuring researchers' ethical attitude. Both quantitative and qualitative techniques can be used within the netnographic framework.

Online Social Spaces: Are internet-mediated places where people conduct their daily life. These spaces provide people with the opportunity to interact with others from a distance. The traces left behind in these online spaces can be used later for social research.

Social Network Analysis: Is a way of finding out relationship between people, groups and/or concepts. This should not be confused with the social network sites such as Facebook, Twitter, and LinkedIn.