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The Invisible Interviewer: Old and New Methodological Issues in Online Research

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Abstract

Over the last two decades, computer-mediated and online research methods have been gaining ground over traditional data collection tools for research. As a consequence, the role of the interviewer is affected. In this article, the visibility or invisibility of the interviewer is used to express the degree of control that the interviewer has in the interviewing process. For example, the interviewer has full control in face-to-face interviews, but this control decreases as the interviewer's level of visibility decreases, such as in phone interviews, and is nullified when the interviewer is missing entirely, such as in self-administered surveys on the web. This raises the question of how the visibility of the interviewer is currently surrogated and how the solutions adopted in social research may be suitable for describing the corresponding impact of digital technologies on social life. In concluding, possible scenarios of new digitally mediated solutions of data collection are presented. These scenarios take also into consideration data treatment technologies and their capacity to control the enormous amount of material that digitally mediated social life has produced..

Keywords: web interviewing, online research, web survey, research bias

1. Background

During the last two decades, the social sciences have been challenging intriguing dilemmas. By providing useful tools for work and leisure communication, digital technology (DT) has been increasingly offering

opportunities of mediated interaction in daily life. Such a scenario deeply affects people's social roles, identities, and social belonging by offering new sociological perspectives from the theoretical viewpoint. On the other hand, empirical studies can rely on new methodological tools of inquiry that prove to be efficient, friendly, and usable in online as well as in offline environments. However, this occurs at the expense of traditional research methods and techniques, one among these being the Face-to-Face (FtF) interview. Based on the intriguing analogy 'in survey as in life' (Schuman, Ludwig 1983), the FtF interview is certainly the most typical and emblematic tool of data collection in the history of empirical research.

However, the role of the main actor in such an interview, the interviewer, has undergone sharp and emblematic changes in meeting DT. The introduction of telephone interviewing has rendered him/her invisible, and the disembodiment became even more systematic with the mediation of the computer. He/she assumed several nuanced roles as interviewer/observer/lurker in the virtual worlds by becoming superfluous with self-administered web tools (questionnaires or interview guides) and with the introduction of phone interviewing conducted through synthetic voices (IVR).

A non-secondary question is whether all this continues to correspond to the concept of an interview. Examining the archetypal definitions provided by etymological dictionaries, one among many others provides the following meaning: 'Interview (1510s), "face-to-face meeting, formal conference," from Middle French *entrevue*, verbal noun from *s'entrevoir* "to see each other, visit each other briefly, have a glimpse of"[…].[1]

According to this definition, the interview would be a short visit involving the material co-presence of two persons, one of who (the interviewer) asks one or more other persons (the interviewee/s) to speak on a given topic. In the course of such a visit, they interact in a number of ways, the main of which is visual-verbal interactions, while the others would be non-verbal intentional/unintentional interactions typical of any human encounter. This emphasizes the concept of an interview as being 'fully' rooted in non-mediated communicational interactions as confirmed in a number of textbook definitions (Gubrium et al 2012), whereas some authors support that the term "interviewing" refers to FtF by excluding all other forms of written or phone conversation (Lopez 1965; Galimberti 1992).

In a classic textbook on interviewing, Kahn and Cannell (1954) extended this rationale to all types of interviews both in qualitative and quantitative research by suggesting that the interviewer's ability to conduct an inquiry

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1 Online Etymology Dictionary: http://www.etymonline.com.

involve keeping control over the issues that originate from verbal as well as non-verbal interaction. Therefore, the centrality of the role of the interviewer as a mediator of such dynamics would be one of the constitutional aspects of interviewing.

In the current article, the challenging theme of the interviewer's invisibility has been used as a clue for discussing a number of methodological issues that arise from the technical solutions taken for surrogating his/her absence.

2. Technological issues and the researcher's invisibility

Dillman (2007) writes that in the twentieth century, the most significant advances in survey methodology were the adoption of random sampling in the 1940s; phone interviewing in the 1970s; and the current use of e-mail, Web, and IVR surveys.

While cost and wastage of time are the leading factors that are behind such innovations, random sampling contributed to reduce the number of interviews by increasing sample precision and estimates. Later (in the 1980s and 1990s), coupling phones with computers through the CATI systems (see tab.1) integrated a number of traditionally separate interviewing procedures through dedicated software packages. This increased the interviewer's control over the interview and best suited data management systems previously introduced, such as the SPSS (Statistical Package for Social Sciences), the SAS (Statistical Analysis System), or the STATA.

Tab1. The extent of the presence of the interviewer in Computer-assisted Survey Information Collection (CASIC) (modified from Vehovar, Manfreda 2011)[2].

Name	Acronym	Extent of the presence of the Interviewer
Computer-assisted Personal Interviewing Tablet-Assisted Personal Interviewing Smartphone-assisted Personal Interviewing	CAPI TAPI SAPI	Present: FtF interview; questions are read on a portable computer and responses are typed on a keyboard

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2 In one of the early Italian works on this subject the acronym C.A.I (Computer-Assisted Interviewing) was used. See Delli Zotti 1986.

Computer-assisted Self-Interviewing	ASI	Present: Self-administered by respondent who reads questions on the screen and types answers on the keyboard
Computer-assisted Telephone Interviewing	CATI	Invisible (remote): Interviewer calls the respondent, reads questions, and types responses on the keyboard
Interactive Voice Response	IVR	Not present (simulation): A synthetic voice asks questions over the phone; respondent answers are tape-recorded
Computer-assisted Web Interviewing or Web Surveys	CAWI	Not present: The questionnaire is self-administered through the Internet
Touch-Tone Data Entry	TDE	Not present: The respondent answers through the phone handset
Questionnaire by Mail or Floppy Disk	DBM	Not present: The questionnaire is sent by e-mail or disk and self-administered by the respondent
Computer-assisted Video Interviewing	CAVI	Present: CATI with audio-video interaction
Computer Audio-Recorded Interviewing	CARI	Present: CATI or FtF recorded for quality or training improvement

Such milestones, relative to the survey research in its encounter with the DT, are also the steps to the invisibility of the interviewer whereas, to the extreme, the interviewer is totally missing in web (CAWI) and IVR surveys.

Just like in survey research the computer first met the qualitative approach with the introduction of the package for computerized qualitative text analysis, the *Non-numerical Unstructured Data Indexing, Searching and Theorizing* (NUD*IST), that saw light of day in 1981, followed by the Atlas.ti in 1993 (*Archivfür Technik, Lebenswelt und Alltagssprache. TextIntepretation*) and later by the NVIVO. Explicitly or implicitly, all such computer programmes follow the Glaser and Strauss (1967) *Grounded Theory* that was subsequently operationalized by Strauss and Corbin in 1990. Since such software packages were aimed at text processing, they were of no consequence in interviewing, except that tape recording somehow became mandatory. Instead, interviewer invisibility began, just like in survey research, with the adoption of telephone interviews. This practice lasted decades until the phone was taken over by digital communications systems: typically the e-mail and, to a lesser extent, the VOIP (Skype, WhatsApp, etc.).

Until the end of the 1980sthe invisible technological interviewer had to do with an equally invisible respondent, this latter having however a normal

(offline) life. During the 1990sthe social sciences happened to discover a totally new subject: the so-called online communities. Sociologists realized that certain communication platforms (particularly BBS and Usenet Newsgroups) attracted people who were interested in particular topics (hackers, people having particular diseases and health condition, hobbies, etc.). Their diligent attendance appeared to shape aggregates recalling the features of social communities. Such social groups were considered 'virtual' (Rheingold 1993: Etzioni, Etzioni 1997), because they were reputed to have only an online existence (Fox and Roberts 1999). Being considered communities, though of a very special type, numerous methods of ethnographic inspiration (net-nographies) were applied (Kozinets 2002), while such new subject raised the interest of the whole world of social research, including the stream of the web surveys.

Tab 2. The interviewer in online qualitative research.

Name	Technologies	Extent of interviewer (I) presence
Audio-video conferencing	VOIP, Skype, WhatsApp, Dedicated platforms	Present Visible (Remote)
Mail Interviewing	Internet E-mail	Invisible-delayed interaction
	Blogs – images, video-tapes	Not present
Social forms	Various platforms (Common ancestor, the Usenet Newsgroup 1980)	Invisible-delayed interaction
	Communication protocols	Active as a full participant. I has competence for sharing experiences and social behaviours in the group
		Lurker (remote): I is not active as a participant; other participants do not know that I is online
		Overt non-participant. I is allowed to witness participants communication purely as an observer and to ask questions
		Overt participant: I is accepted and interacts as a member and asks questions as a researcher and participant

Name	Technologies	Extent of interviewer (I) presence
Chat Rooms	Various platforms (common ancestor is Bulletin Board Systems BBS, 1979)	Present Invisible
	Communication protocols	As for Social Forums
Multi-User Dungeon	MUD	Virtual: Interviewer acts through an Avatar

The popularity of online environments has increased at an unforeseen pace in the current century. People were attracted by the world of the Internet. The reasons for this were everyday clues—such as the search for information, willingness to share experiences, eagerness of seeking solutions to problems, need for experimenting new social contacts, etc.—until some authors began theorizing (Bakardjieva 2003, Shirky 2008, Cipolla 2014) the continuity between offline and online everyday life worlds, whose confines were decidedly breached with the advent of 2.0 platforms: Facebook, aNobii, YouTube, Linkedin, Instagram, Twitter, etc. in the first decade of the 2000s.

In such contexts, the interviewer might assume different degrees of visibility, from the complete invisibility (as a lurker) to a complete peer presence as a participant-observer, more or less overlapping the traditional roles codified in the classic methodological works on ethnography, featuring from complete participation to complete observation (Gold 1958; Hammersley and Atkinson 2007).

3. Time/space, populations and samples

3.1. *Invisible interviewers and asynchronous interviewing*

The disembodied online researcher has the option to choose between two basic alternatives when it comes to conducting interviews: synchronous and asynchronous interviewing. Synchronous interviewing refers to the traditional conversational setting, in which the interviewer's questions are followed by the respondent's answers in real time.

When certain media or platforms are used (such as e-mail or social forums), there is typically a delay in the question and answer sequence. This creates an expansion of time for both the respondent and the interviewer to

ask a question or provide an answer. This is just the case of the asynchronous interviewing.

Obviously, this is not a new discovery made with the advent of online research—this delay in communication is also experienced by people who correspond by postal mail. Further, self-administered questionnaires for research surveys have an inherent discontinuity in communication that does not exist when the interview is conducted by an interviewer.

The literature on online research has brought attention to the different properties of the synchronous and asynchronous modes of communication related to interviewing. From such literature, the following advantages of asynchronous interviewing are identified. First, there is the issue of overcoming the problem of respondents' technological literacy, which asynchronous interviewing addresses by decreasing the pressure of an interviewer's line of inquiry. This could benefit people with disabilities, as it can enable them to more thoroughly describe their thoughts. Second, asynchronous interviewing addresses the potential problem of time differences between the interviewer and interviewee, when each is in a different time zone. Third, asynchronous interviewing facilitates thoughtful and well-considered answers[3] by giving the respondent the time to better immerse himself or herself in the questions and to gain a deeper understanding of the issues at stake.

James and Busher (2009) argue that the asynchronous mode creates a new concept of time that is neither linear nor punctual, which thereby enables the provision of hypertextual links to other texts. However, the asynchronous interviewing mode also has a number of disadvantages. First, the absence of time restrictions for providing completed questionnaires may cause respondents' feedback to become delayed by weeks or even months. Second, if respondents have too much time at their disposal, it could encourage them to work out socially desired answers. Third, the richness of respondents' answers may be undermined by the loss of spontaneity. Lastly, it is difficult for the interviewer to interact with the interviewee and ask probing questions in an asynchronous interview.

The other method, synchronous interviewing, allows for more spontaneous answers that are expected to be free from the social desirability bias. Additionally, this mode of interviewing allows the interviewer to more

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3 This property is related to the concept of 'reflexivity' in the sense of often used in qualitative research methodology, such as by Denzin (2001) in his 'reflexive interview' and previously by Guba and Lincoln in their 'Naturalistic Inquiry' (1985), whereas reflexivity is the means by which to relate the interview questions (and answers) to the context of knowledge construction.

easily determine—and interpret—the typical respondent's emotional reactions, which are important to the development of the interview.

There are fairly general rules underpinning the relationship between synchronicity and the invisibility of the interviewer. Synchronous interviewing is expected to rely on the interviewer's (visible or invisible) constant presence over the course of an interview, while the absence of the interviewer and a necessity for intervals between interview questions and responses call for asynchronous interviewing. That being said, qualitative researchers can observe that the interview relationship could be 'intermittent' but constant (Golding 2014), such as in a follow-up interview after a surgical operation. This could also be true for quantitative research; researchers contend that in web surveys, modes (postal, telephone, FtF and web interviewing) can be appropriately mixed in order to increase participation in surveys (e.g., see section 4.2; Dillman 2009; Edwards et al. 2002; ARSS Veneto 2008; CDC 2010). That is to say, general rules on the subject may be interpreted with reasonable flexibility.

3.2. Sampling in web-based research and the 1% rule

One of the most pertinent problems in DT-based research is that of sampling procedures. While it is beyond the scope of the present article, sampling on the Internet is still met with scepticism from survey experts. Dillman (2009) contends that the problem will last until there will be a divide between Internet users and non-users. However, this is only a part of a more general problem, which is the impossibility of adequately defining the population of the Internet. Fricker (2011) observes, in describing web sampling strategies, that no Internet-wide sampling framework exists, and that this will continue to be the case in the future. Probability-based Internet samples can, therefore, only rely on the non-Internet procedures of the contact and recruitment of individuals to be sampled. This is true for multiple sample selection strategies, including list-based, non-list-based, random digit recruited, postal mail, in-person, and other selection strategies.

In qualitative research, sampling is considered less essential. As sampling for qualitative research is expected to operate within closer surroundings and on smaller communities, it relies on purposeful sampling designs and saturation criteria (Creswell 2012), adopts units of analysis that are not necessarily people but also such acts of speech, such as posts on social media, blog posts, tweets, e-mail messages, and the like.

For both the qualitative and quantitative approaches, an important threat comes from the so-called '1% rule' coined by the bloggers and more recently been termed the '90–9–1 rule'. This rule posits that one percent of all people

active on social media and in online communities are involved in communication, while ninety–nine percent are involved in lurking. Charles Arthur from *The Guardian* (2006) observed that YouTube, which started in 2005, counted 100 million downloads for every 65,000 uploads, a consumer–creator ratio of about 0.5%. Wikipedia has shown a similar trend, as 50% of all article edits have been made by 0.7% of the users. More recent examples of online communities (BBS and Usenet) refined the rule by reporting that zealous participants and relevant contributors constitute 1%, while occasional contributors constitute 9%, and lurkers constitute 90% (Van Mierlo 2014). The 1% rule indicates that the current methods of qualitative sampling, such as using mailing lists of participants, snowballing, or selected threads, could neglect the wider population of lurkers or of external participants. Whether or not such peripheral users should be considered part of the community is a challenge for whichever sampling strategy is used (Fricker 2011).Obviously the same is applicable to survey sampling on the Internet, as the opinions of a small minority would be oversampled, while those of the majority would be under-sampled and the lurkers' points of view completely lost.

4. The loss of the interviewer in web surveys and some surrogating measures

During the last fifty years, survey response rates have decreased dramatically. One of several studies on this phenomenon, a meta-analysis made on selected refereed management and behavioural science journals (Baruch 1999; Baruch and Holtom 2008) showed that the response rate in 1975 was 64.4%, which fell to 48.3% in 1995. Other studies show this trend in international settings, such as a study of De Leeuw and De Heer (2002). Additionally, the recent ESOMAR 2014 annual report shows that survey expenditure, as a percentage of the global corporate research spending, has decreased constantly during the 2000s. One of the primary factors responsible is excessive surveying,[4] which led people to reject the overwhelming obtrusiveness of survey research by declining to respond. Nevertheless this is only one among other important factors, which include also methods of interviewing. To this purpose, for example, Lozar-Manfreda et al. (2008) found that the response rate to web surveys (CAWI) was 6%–15% lower than

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4 On October 13, 1998, columnist Arianna Huffington wrote, "It's no wonder that the mushrooming number of opinion polls, coupled with the outrageous growth of tele-marketing calls, have led to a soaring refuse-to-answer rate among people polled" (The New York Post, p. 27).

for any other interviewing method, while Baruch and Holtom (2008) reported that the highest response rate in 2000 and 2005 was on average that of the FtF interviews (62.4%), followed by telephone interviewing (49.1%), postal mail surveys (44.7%), and web surveys (38.9%).

Comparative studies show that the FtF interview method is generally less efficient in terms of its cost and time. However, it is still the best performing as far as response-rate level is concerned (Szolnoki and Hoffmann 2013). It is notable that all interviewing modes in which the interviewer was absent have lower response rates, which raises the question of whether and how this could be mitigated.

4.1. The invisible interviewer, survey errors and respondents' decision-making

Low response rate is a type of survey error that, together with measurement errors (e.g., inaccurate responding, question formulation, and response scales) is considered to be more closely tied to interviewing (Groves 1989). Since the late 1980s, the problem of keeping these kinds of errors under control was taken seriously, and this is evident in the enormous quantity of articles dedicated to the subject. Different approaches have been suggested in the literature according to the respective disciplines of the researchers. We recall here statistical and sociological approaches. The statistical approach focuses on the variables related to response-rate levels, which traditionally include gender, age, socio-economic status and health status. Attempts to reduce nonresponse biases from this perspective consist of making post-survey adjustments. In particular, case responses are weighted according to the probability of cooperation (Kalton 1983). The sociological approach is aimed, instead, at a systematic understanding of the refusal component of nonresponse. In his early work on the motivation to participate in surveys, Dillman (1978) suggested his classic triad of motivators: trust (credibility of the actors and of the sponsor), rewards (incentives) and social costs (time waste, endangered confidentiality, etc.). When these motivators are achieved, the interview could be successful.

A more systematic model, based on the respondent's decision-making, was later suggested by Groves et al. (1992). By starting from the rational choice theory, the writers noticed however that the decision to respond to a survey is a decision of a very particular kind. This decision relates to an event of a momentary nature, one rarely regarded as being of great importance for the person being sampled. Therefore, this decision-making process could be better explained by an array of 'heuristic' rules, which shift depending upon the person, moment, and circumstances whenever the respondent's decision to participate is made. Some of these rules may include, for example:

reciprocation (related to benefits exchange), consistency with personal views, beliefs and deeds, as well as liking (in particular the interviewer's appeal) and authority (nature of the sponsor and of the interviewer), etc. The suggestion of a heuristic instead of a systematic approach underlines that the suitability of either approach should be understood by the interviewer during the interaction with the respondent and translated into appropriate interview actions.

These theoretical issues were the basis of a subsequent model called the Leverage-Saliency Theory (Groves et al. 2000). This theory posits that leverage includes all positive incentives provided to persuade the potential respondent, while saliency is one of the attributes that the interviewer decides to use in order to increase the probability of acceptance.

One contribution to this theory's perspective was that of the sociologists at the University of Wisconsin who used conversation analysis (Curl and Drew 2008) to explain how the interviewer can use interaction signs to predict the likelihood of acceptance or refusal. These interpretive abilities allow the interviewer to tailor conversation in kind (Maynard et al 2010; Shaeffer et al 2013).

It is interesting to note how such systematic attempts involve the visibility or invisibility of the interviewer. In Grove's 1992 article, the interviewer is still identified as a traditional FtF visible interviewer (mainly), whereas in Shaeffer's conversation analysis, the actor is a disembodied telephone interviewer. In both cases, the theoretical issues rely on improving the interaction between the interviewer and respondent. The traditional CATI method shows a higher response rate than the web survey CAWI method, because in the CATI method, the interviewer can support the respondent's decision-making throughout the interview including style of question formulation (Conrad and Schober 2000) and by implementing other appropriate supportive actions.

4.2. The missing interviewer and mixed modes solutions

How such types of survey errors are faced when the interviewer is missing? Who and how helps the respondent in such complex decision-making process? How is the missing interviewer surrogated?

The response is that in the self-administered web survey all cards at the disposal of the researcher have to be played in advance. All possible questions from respondents (how to answer, how to navigate through the questionnaire, how to control emotional states, etc.) have to be anticipated and all communication between the researcher and respondent must occur through the questionnaire itself, its wording, its structure, and layout.

In the history of survey research, some classics, such as the notorious 1935 Lazarsfeld *The Art of Asking why*, later paraphrased by the 1951 Payne's textbook on *The Art of Asking Questions*, have always provided researchers with guidelines for questionnaire construction and wording. In order to face measurement errors due to the absence of the interviewer in the last 30 years, methodologists have addressed other disciplinary contributions. In *The Science of Asking Why* Shaeffer and Presser (2003) suggested that questions should be formulated along four critical phases. These include: a) how people understand questions, b) how contents are retrieved in memory, c) which are the decision-making issues through which the respondent selects the answers, and d) how the answers are formulated and evaluated (social desirability, obtrusiveness, accuracy, etc.) (Tourangeau 1984). Since in web-surveys the interviewer is missing the questionnaires should be able to 'speak alone' and cognitive principles must be also used to organize the questionnaire visually. The recipe suggested by Mullin et al. (2000) includes the following four principles, each of which have a number of issues:

- simple design (avoiding grids and repeated instructions, de-emphasizing irrelevant information, using response boxes);

- consistent design (maintaining the same graphical structure throughout the questionnaire); organized design (locating instructions, grouping concepts);

- natural design (creating a natural flow for easy navigation in the questionnaire);

- clear design (using graphical guides, applying figure-ground segregation, select print styles, etc.); attractive design (using asymmetry, stimulating interest with title pages, figures, etc.).

Another stream of solutions is that provided by the adoption of mixed-modes of administration that could mitigate the absence of interviewer in the web surveys.

Such strategies are not new. Mixed modes strategies consist of combining two or more inquiry modes (online interviewing, postal survey, CATI, FtF) in the same survey. Reasons for this have to be seen in the attempt to support low response-rate modes of interviewing with more acknowledged or popular modes, for example in postal mail research, later with telephone interviewing and recently with web-based interviewing (Dillman et al 2009[b]). There are three types of mixed-mode procedures. Referred to web surveys one such combination comprises using different modes in different phases of the survey: for example, presentation and/or solicitation can be made with one mode (say FtF, CATI or post), while questionnaire administration can be done through web interviewing. An alternative mixed-mode strategy involves using different modes according to the suitability to particular sample subgroups.

For example web surveys could be used for those respondents who have Internet access, by asking the others to choose among different interviewing solutions. A third stream of mix can be adopted in panel research, when online research is conducted on the first administration of the survey, while other modes are adopted in follow-up administrations.

It is worth noticing that the mixed mode strategies become important in all cases of interviewer's disembodiment. In addition, in the case of web survey the previously eliminated interviewer is called back, either in the invisible version as a CATI system interviewer or even as a visible FtF interviewer in the flesh.

Such solutions are not exempt from problems and criticisms however. First, the advantage of low cost of a web survey could be negated if the sample is partially completed through more expensive interviewer-mediated techniques (Vehovar, Lozar-Manfreda 2011). Second, responses may vary fairly from one mode to another. Comparative analysis show, for example, that the data collected through different self-administered modes are compatible (De Leew 2010) while perplexities are raised when data from modes with the interviewer and modes without interviewer are collapsed (De Leeuw, Hox 2011).Dillman (2009) suggests therefore to keep a 'unified design' meaning that whatever the interviewing mode, structure and questioning issues of the questionnaire should be the same.

5. Interviewer's disembodiment in qualitative research: consequences and surrogative solutions

5.1. Written text, hybrid language and good manners in online environments

A typical aspect of web qualitative interviews is that their communication code is mainly written text and this suits the interviewer's invisibility as well as the asynchronicity of interactions.

As Markham (2004) argues, however the elimination of bodies from the interview changes the nature of the interaction from orality to textuality. This cannot be considered a minor shift. When using written text only, the sense-making process becomes particularly complex, since oral communication is not supported by other forms of non-verbal gestures or visual clues.

How does the invisible qualitative interviewer surrogate the richness of full communication of FtF interviewing?

In a metanalysis of qualitative studies conducted by e-mail between 1994 and 2005, Meho (2006) observed that the answers provided on the Internet were of higher quality than those provided in correspondent FtF interviews.

The reason provided by the author is that the asynchronous mode (adopted in such studies) allows for more meditated responses that brought some respondents to correct first-hand responses, thereby improving them with more insight and accurate contextualization. Nonetheless, it is also reasonable to maintain that researchers cannot always count on the self-balancing capabilities of the individual in correcting research project errors. The preparation of an interview guide, or writing a set of questions, must be meticulous and accurate. Qualitative researchers could also benefit from examining cognitive and formal principles (obviously taking those that suit them best) for survey questionnaires methodological proposals, because using ambiguous sentences and inappropriate visual formats can trigger errors that are of the same very stream.

With regard to the aspect of how the FtF is surrogated, various writers speak of hybridity when describing the language used in online interviewing (James and Busher 2009; Hines 2000; Davis and Brewer 1997). Such hybridity is intended as a combination of written and spoken styles that go beyond symbolic alphabetical symbolism by adding elements that tend to substitute the non-verbal communication of the FtF discourse. Overall, online written text is considered writing that reads as though it were spoken, that individuals can personalize by emulating the environment of a true empathic conversation.

Communication in web environments takes place through special jargons often divided into local dialects that have been customized to group belonging. The following are some of the elements of such language.

a) Letter homophones: abbreviations (shortening of words: U for 'you', CU for 'see you', etc.), homophone combinations with numbers (2L8 for 'too late', or 2U2 for 'to you too'), or acronyms (AML for 'all my love' or AOMM for 'Always on my mind').

b) Punctuation and capitalization of letters and other symbols are used for attributing emotional content to sentences. Grammatical punctuation and apostrophes are omitted. Words in bold or capital letters express anger, aggressiveness or stress.

c) Onomatopoeic or mis-spelling. For example 'hahaha' indicates laughter.

d) Emoticons. Smileys and keyboard-generated symbols are used as pieces of dialect and differ according to social groups and nationality.

Apart from these slang principles, there are languages that have technical origins, such as the Leet (with ASCII characters in the place of normal letters, originated in the Hackers' environment); the Padonkaffsky (Olbanian, developed by Russian intellectuals using the Internet). (Baron 2000, Hale, Scanlon 1999) and others.

Besides the use appropriate language good manners are compulsory in the online environments. Netiquette is the *porte manteau* of the rules that have been codified, for example in the Virginia Shea's catalogue (1994) that has become a standard[5].

5.2. Identity construction and data reliability

Another typical issue of qualitative online research is the authenticity and credibility of self-reports. This problem is emphasized by the invisibility of the interviewer and affects also survey research. While solutions in such latter case are typically described in the textbooks or prescribed by professional standards (i.e. ESOMAR 2011; etc.) in qualitative research this problem assumes more controversial features for a number of reasons that will be discussed in the following.

The reason for credibility assessment is of methodological interest because the Internet is the ideal place for lies, hidden presence, masked identities, lurking, etc. On the other hand, (and mostly for the same reasons) it is also the ideal environment where people can experiment with new identity construction. Studies on that matter relates to the studies on identity after Goffman (1959) and to those on the multiple identities in postmodern societies by Beck (2002). One of such studies purports that the anonymity on the Internet would produce a shift from individual to social identity, known as the SIDE model (*Social Identity and Deindividualization Effect*) (Spears, Lea 1994; Tanis and Postmes 2005). Other studies on multiple identities have been made on experimental settings of the studies on MUDs (Multi User Dungeons), where such identities are operationalized through Avatars (see Tab.2).

Relationships between identity reliability and identity construction are a typical example that echoes what was stated in the beginning of this section. On one hand, this enhances the methodological problem of credibility (reliability) of respondents, while, on the other hand such respondents are actors of new events of (possible) theoretical relevance.

In the early so-called virtual communities (BBS and Usenet platforms), attenders preferred to assume identities different from those of their real environments. The mismatch of virtual/real world identities was underlined

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5 The netiquette Decalogue includes the following: 1: Remember the Human; 2: Adhere to the same standards of behavior online that you follow in real life; 3: Know where you are in cyberspace; 4: Respect other people's time and bandwidth; 5: Make yourself look good online; 6: Share expert knowledge; 7: Help keep flame wars under control; 8: Respect other people's privacy; 9: Don't abuse your power; 10: Be forgiving of other people's mistakes (Shea 1994).

by the use of nicknames that, among others, were suggestive of would-be and role-play identities.

However, how does one cope with the problem of authenticity when such people are involved in a study?

The suggested solution is to triangulate online with contemporary or pre-existing offline relationships. The latter could be analyzed (say) through FtF interviewing and the entire procedure would assume the feature of a mixed-mode approach (James and Busher 2009). The authenticity would be assured through the repeated interviewer-respondent interaction. By this the latter would be able to check the consistency of what is written by ascertaining the identity of the participant.

However, some writers, such as Hines (2000), refute such procedure by contending that if such identities are original, they can be valid in themselves, be they virtual or real, and as such they would need no other kind of authentication. On the other hand other authors support that triangulation is a suitable procedure, since online/offline identities are not separated but are based on everyday life. This would affect how participants behave in both online and offline conversations (Mann and Stewart 2000; Kendall 1999).

Such a stance shows that there are no definitive solutions as far as authenticity and credibility are concerned.

Besides the problem of authenticity of identities, there is also that of the authenticity of the content of what is said or written. James and Busher (2009) suggest that in the co-construction of reality, the attitude of the interviewer and his/her capability of being involved in the reality is of utter importance. They suggest that the evaluation of such authenticity should rely on how some principles on the conduct of the qualitative inquiry are met. Such principles are highlighted in the literature of the last 30 years (see Denzin, Lincoln 2011), that on ethnography in particular (Creswell 2012; Hammersly, Atkinson 2007). It typically includes first hand involvement, immersion in day-to-day lives of people, interaction and culture-sharing in the group, etc.

All such principles applied to the online environment bring however to somewhat contradictory conclusions.

First if identity of respondents and content of communication could not be separated from the problem of authenticity ends by relying not on data, but on the researchers' capability of producing consistent and convincing accounts of conversations.

Second it should be recalled that in some environments, identity is intentionally hidden to all lay people, including interviewers, and can be disclosed only to practitioners (MDs, social workers, psychologists). This was considered as one of the aspects for supporting the use of the Internet (and of

written text) for people whose condition should be treated confidentially. In such a case, however continuity online/offline cannot be ascertained.

Third online/offline triangulation is possible for a reasonably restricted number of participants and this could suit analysis of small communities, while it would be critical for wider communities.

5.3. The written text communication in qualitative online research: a status quo?

A simple thought that comes to mind when reading about qualitative research methods based exclusively on written text, is why DT does not provide audio-video facilities that could easily make use of normal linguistic and body language issues. The answer is twofold, although the literature is not so clear and convincing regarding this aspect.

On the one hand, written communication is undoubtedly cheaper and more efficient, while the popularization of audio/video facilities has been prevented thus far by a number of technical variables— such as limited bandwidths, network traffic, etc. (Hewson 2007; Fielding and MacIntyre 2006)—and cost. On the other hand, however, several such technical problems have been completely overcome at present. Salmons (2010) recalls that there are various types of solutions available such as video-conference, video call, multichannel meetings, immersive 3D environments, not to mention audio-video conversation apps in the Facebook platform. Nevertheless, only a few studies have been conducted using online audio-video material. Among these O'Connor and Madge 2001 used expensive university video-conference apparatuses, while the totally inexpensive Skype was uses in a very few studies which include Bertand and Bourdeau 2010; Hanna 2012; Hay-Gibson 2009.

A second reason is that written text has become a communication standard in people's daily lives, be they engaged in online communities or in normal phone SMS communications. People's confidence regarding such a communication mode leads to a particular type of literacy. On the other hand, such a trend seems to show all features of a tradition also for researchers. In fact there is continuity between written messages, asynchronous mode of interviewing and text processing software (see section 2). In addition written messages are permanent, easy to retrieve and do not require transcriptions.

In conclusion despite the several and powerful technological alternatives available to date, the use of audio-video materials still continues to appear to be far away from the common sense of the researcher and the interviewer. Such observations corroborate the idea that, for a number of reasons, written text communication in people's experience as well as in researcher's practices has become (itself) a *status quo*.

6. Possible future scenarios: the return of the interviewer?

In this paper, the visibility or invisibility of the interviewer has been used as a rhetorical clue to describe general matters relative to the introduction of DT in quantitative and qualitative social research methodology.

Historically, interviewers faced disembodiment from respondents (for example in postal mail surveys) before the merger of communication technology with social research, at which point remedies, such as mixed-mode strategies, were adopted. The contemporary context is very different. DT have affected the methodological debate and research practice, just as they have been increasingly affecting (to a greater or lesser extent) economic activities and the everyday lives of people.

This article focuses only on the aspect of this issue that relates to the methods and procedures of data collection. In the earlier discussion, we saw that major harm to the quality of data occurs whenever the interviewer is missing. Surrogative measures to address the interviewer's disembodiment seem to paradoxically rely on calling back the same interviewer (in particular phases of the interviewing process), while, as we saw above, some other operations, such as sampling procedures, have to be grounded in the offline world.

These observations suggest that it is best to avoid both the uncritical embrace of the cause of digitalization at all costs, as well as the sceptical refusal of the useful support that digital media can provide. The same attitude should yield the scrutiny of possible future scenarios. Data on the research market show that the CATI is still the most popular interviewing method,[6] though the ESOMAR 2014 Report shows that there is a shift of interviewing methods towards the interviewer-less web survey (CAWI) and IVR. Another international source, the GRIT Report 2014, highlights remarkable differences between the US and other countries. The CATI was used by 37% of surveyed US operators, while figures from Europe and the rest of the world were 48% and 62% respectively; FtF was still used by 20% of agencies in the US, while in Europe, the figure was 37%, and in the rest of the world, it was 63%. These data show that in quantitative research, the consensus towards web surveys is not generally applicable, and that in Europe, DT use goes along with a reliance on more traditional interview-based surveys, with both visible as well as invisible interviewers.

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[6] This is also true of Italy. See the website of the Presidency of the Council of Ministers, Department for Information and Editorial Activities: (www.sondaggipoliticoelettorali.it).

The GRIT 2014 shows that this differential also affects qualitative research. While in the US, qualitative research relies mostly on clusters of digital media (e.g., online or webcam-based focus groups, BBS, and in-depth interviewing via mail), in the rest of the world, there has been the unexpected return of the interviewer in the flesh, especially for focus groups and for in-depth interviewing.

This evidence suggests that the rise of new digital solutions should not necessarily be interpreted as an abrupt change in the nature of research. DT seems instead to provide new opportunities to broaden the array of tools that support the researcher's decision-making. This is particularly true for the European research environment.

Some specific scenarios include the following:

Survey research. Most of the possible considerations on this kind of research have been made above. Nonetheless, there are considerations to be made of new issues related to mobile surveys and web panel research. This latter method is acknowledged as being more cost-efficient (the sample is collected only once) and more cost-effective (it includes longitudinal observation) than cross-sectional sample surveys. Currently, however, samples in panel research rarely respect probabilistic criteria and when they are recruited online they end by running the risk of systematically overestimate the number of Internet users (Fulgoni 2014).

Qualitative research. This research approach includes focus groups and in-depth interviews that already benefit from the resurgence of the visible interviewer, as shown by the GRIT data. Nevertheless, the shift from written text messaging to audio-video technologies that could turn the still-invisible interviewer into a visible one have yet to transpire because of the reasons shown in the previous section. Additionally, the use of webcam interviews is still limited to a minority of interviewers and primarily takes place in the US. The propensity to use netnography and online qualitative research is, however, increasing by including new methods, such as the use of mobiles (GRIT 2014).

Big Data and secondary analysis. As far as the future of digital research is concerned, the literature insists on an array of strategies that allow for the drawing of information from the vast amount of data that the use of digital media and its globalization has produced. The types of research interested into this field of research can be grouped into three partially overlapping categories. The most traditional one is the secondary analysis of archival data (e.g., databases including macro or micro-data on behaviours, attitudes, and values for quantitative as well as qualitative data) that are made available on the Internet by specialized corporate or academic organizations (see Fielding et al. section 6). Another traditional set of methodologies are the so-called

unobtrusive methods (Lee 2000), that have been contextualized to the study of online activities by Hines (2011), while Janetzko (2012) coined the expression 'non-reactive analysis', which suggests research on such indirect sources as e-mail server logs, instant messaging logs, and environmental variables. The third stream is the so-called 'Big Data Analytics'. This is not a methodology, but an array of technologies that meet a number of common criteria (volume, variety, velocity, and variability) (Russom 2011) supported by powerful hardware machines and integrated software related to data mining, searching, retrieving, storing, sharing, transferring, computing, and visualizing. Big Data can bring forth new ways of thinking about and modelling social realities, thereby contributing to an expanded sociological perspective (Boccia-Artieri 2014).

Each of such scenarios may raise perplexities or, by contrast, trigger enthusiastic expectations. Future experiences however will show if and which of such methodological perspectives are reasonable and viable.

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