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Between Text and Context

Innovative Approaches to the Qualitative Analysis of Online Data

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Introduction

In the age of Web 2.0 and social media of all forms—blogs, online social networks, online forums, tweets, and the list goes on—studies relying heavily on online data have multiplied (Fayard and DeSanctis 2005, 2008, 2010; Nardi 2004; O'Mahony and Ferraro 2007; Orlikowski and Scott in press; Schulze in press; Vaast 2007, 2013). Who would not want to use online data, which are publicly available and easy to access? No need to go negotiate access to an organization, you can just open your browser and, at most, create an account. However, ease of access is not synonymous with ease of analysis and interpretation. Indeed, having access to a large amount of data does not necessarily mean that we have access to "rich data" in the sense anthropologists talk about "thick descriptions" (Geertz 1973), that is, descriptions that specify many details, conceptual structures, and meanings and put them *in context*. In that sense, context is at the core of ethnography and qualitative research, broadly speaking. In order to produce thick descriptions of social practices, qualitative researchers rely heavily on an understanding of the settings and circumstances in which the practices take place (Geertz 1973; Van Maanen 2011).

Such an understanding is what we miss while analyzing online data, which are mostly text based and for which we often lack context. While we can read all the posts on a forum, and while we can access them "forever," we are at the same time missing a lot of important elements regarding the posters' identities, moods, and environments, as the famous *New Yorker* cartoon "On the Internet, nobody knows you're a dog"[1] reminds us. This lack of information is what we call the *contextual challenge*. The question for researchers studying online phenomena then becomes: How can one provide thick descriptions of the social world by studying text-based online interactions?

This is the question we will explore in this chapter by borrowing from literary criticism and building on the distinction between text and context[2] that is at the core of that field. Indeed, as qualitative researchers studying online phenomena, our endeavor seems very close to those of literary critics because of the textual nature of online phenomena: Whether you are studying online forums, email exchanges, tweets, or interactions in virtual worlds like Second Life or World of Warcraft, interactions and practices are mainly textual. Despite the immense amount of text to study (for example, O'Mahony and Ferraro [2007] examined over 17,000 mailing list postings in an open-source project), we are regularly faced with the question as to how much of the context relevant to the

understanding of the interactions is captured in these texts. For example, have authors discussed the same issues in face-to-face meetings as they have in online postings? And if so, how can we interpret the positions expressed in the postings? To what extent can the exchanges of text gathered through online observation constitute a foundation for studying topics such as work coordination, conflict, power relations, or identity?

The challenge of providing "sufficient" and "relevant" context is not specific to online qualitative research; it is also present in traditional qualitative studies in which the researcher is breathing and moving in the same physical world as the people he or she studies. Yet, it takes particular forms when the practices we examine are performed online because we have limited, if any, interactions with the people we study, and thus less familiarity with their social worlds and little understanding of what happens offline. Because of this limited access, it becomes difficult to determine the *relevant* context to interpret these multifaceted social phenomena and to give a sense of immediacy for the practices and behaviors observed in situ. In this chapter, we suggest that a fruitful way to study online data is by rethinking our conception of the relationship between text and context and by recognizing that online phenomena text may sometimes become context. Based on this distinction between text and context, we present three innovative strategies that have been used by qualitative researchers—including ourselves—in order to address these context-related challenges and provide meaningful, rich interpretations of online practices.

The Relationship Between Text and Context in Traditional Qualitative Research

Qualitative research aims to develop rich accounts of practices that provide an understanding of the meanings participants in particular social worlds attach to themselves, their worlds, and the events around them (Elsbach and Bechky 2009; Geertz 1973; van Maanen 2011). To develop such rich accounts, qualitative researchers have immersed themselves in the cultures of the "natives"—that is, their everyday contexts in faraway islands, slums, manufacturing plants, hospitals, police departments, or banks. For example, Bechky (2003) unveiled the complex and subtle knowledge exchanges and transformations taking place between engineers, technicians, and assemblers in a manufacturing plant by developing a deep understanding of the occupational communities involved in the work. Similarly, Fayard and Weeks (2007) illuminated the variations in how different organizational spaces trigger informal interactions by paying attention not only to the physical dimensions of the space, but also by developing an understanding of what was socially recognized as work and appropriate interactions in the different organizations they studied. Also, Metiu (2006) was able to grasp the dynamics among members of a distributed software development team by uncovering the underlying tensions existing between established centers of innovation (in this case, Silicon Valley) and new centers (in this case, Bangalore). These studies derive their explanatory power from their rich descriptions of the links between what has been deemed as context and the focal behavior, from the immediacy of the account, and from the authors' ability to say, "I was there" (Van Maanen, 2011). People's utterances and actions became meaningful thanks to the knowledge acquired by researchers deeply familiar with the context.

Thus, the discovery, the surprise that is at the heart of qualitative methods, come from the writing of a meaningful account of one's deep immersion in a context; through attention to the minutia of everyday life and through attending to the natives' idiosyncrasies and their interactions, the qualitative researcher focuses on particular aspects of the context that he or she explores deeper (Bartunek et al. 2006; Elsbach and Bechky 2009). It is this immersion that draws the researcher's attention to various issues (Elsbach and Bechky 2009). For example, from the myriad contextual factors that could have influenced the dynamics in a virtual team, Anca's presence in the field helped her determine that it was the status relations among the two subgroups (as opposed to the history of the organization, the national culture, or some other factor) that had the greatest traction in terms of explaining what was going on (Metiu 2006).

In qualitative research, context never lives without its textual counterpart; text and context are deeply intermingled. The written text that we call ethnography (Van Maanen 2011) emerges from the researchers' ongoing interpretations of multiple types of texts, some of which are produced by the researcher (e.g., field notes, transcripts, analytical memos) and others produced by the members of the organization studied (e.g., archival documents, meeting minutes, strategy statements). In a sense, qualitative research, and especially ethnography, does not exist in the absence of text. Ethnography, a written representation grounded in the interpretations we researchers developed, is produced through the constant dialogue between the "context" experienced during field work and the multiple textual forms—field notes, transcripts, memos—through which we captured the context. The context is never captured "objectively," of course, but on the basis of the field researcher's often spontaneous decisions on what is important, meaningful, or relevant.

While context is crucial for developing rich and insightful qualitative accounts (hence the articles chosen as most impactful by AMJ editors [Bartunek, Rynes, and Ireland 2006] were lauded for their fit between the data and the theory), it is also important to remember that what is defined as context in an ethnography is largely a choice made by authors as they shape their final accounts (Van Maanen, 2011). During fieldwork, what is the figure and what is the background is never clearly cut. Only later, and due to the constraints involved in writing ethnography, the context is presented as something separate from the practices, as a background or a pretext that influences or shapes the focal practices. Thus, the distinction between the foreground and the contextual background is not an objective reality, but rather emerges from the interpretative act of the researcher. In qualitative studies of online phenomena, because context seems less available,[3] the interpretative act is even more salient, with the distinction between text and context at its core.

The Relationship Between Text and Context in Online Qualitative Research

Qualitative research based on online data seems to be the poor cousin of more traditional qualitative research due to our limited access to context: You don't see people nor their nontextual interactions, and you often know very little about their surroundings. Hence, when it comes to online data, our role becomes one of a literary critic whose analysis focuses on the text, because the author's intention or background experience is rarely accessible, or of a historian, who makes sense of a certain historical period using prominently textual data with no direct access to context (except for contemporary historians). In the analysis of online data, context seems minimal and reliance on text is maximal. Table 36.1 summarizes the main challenges associated with capturing the context in both traditional and online qualitative research.

In online studies, the main corpus of data consists in textually enacted interactions. The interactions thus become objectified, made visible and thus indefinitely accessible and traceable; one can follow the thread of a conversation, go back to previous posts, read through the comments. In that sense, online data might seem richer than field observations because they provide us with an objective image of what is going on—conversations and interactions—without the subjective bias of the researcher taking notes, which always involves some degree of interpretation. For example, in traditional qualitative fieldwork, we might notice a sign between two participants but miss the sign made by a third one that led to the conflict, or we might misinterpret a tone of voice or a nod as friendly or aggressive. While in our fieldwork we try to catch every instant, we always "miss" something and we cannot replay the scene. In contrast, in online data, we can just go back to the evidence of the text, which now seems to have the power of the proof. This is what often makes online data so attractive to researchers: You can observe the online world in a nonobtrusive way (of course this poses particular ethical challenges, which we won't be able to address here; see, for example, Hine [2000] for an overview of these issues); moreover, these posts are potentially available forever.

Table 36.1 The Contextual Challenge in Qualitative Research

Aspects of the Qualitative Research Process	*Traditional Settings*	*Online Settings*
Data collection	Accessing the data can be difficult, and building the corpus of data usually takes a long time. The researcher interacts with the people she is studying. The researcher becomes familiar with the studied people's social and material world. *Lengthy process but rich and deep context.*	Accessing and building the corpus of data can be easy, and data collection may be done in a short time. There may be no interaction whatsoever with the people studied. The researcher may not access at all the participants' sociomaterial worlds. There are no nonverbal cues. *Easy access and large amount of data, but limited context.*
The producer of the main corpus of texts	The field researcher. May include texts produced by people studied.	The people studied. The field researcher may also produce some texts.
Nature of text	Real-time collection of observational data. Recollection and transcription of observations and experiences in the field. Transcripts of interviews. Interpretations of the field researchers. Various documents such as white papers, meeting minutes, design documents, etc. produced by people being studied.	Posts, threads, interactions of people being studied. Their interactions are textual and hence the online text becomes an important part of their context. Field researcher's notes on the (textual) interactions they observe and on their interpretations of the observed online interactions.
Data analysis and interpretation	Emerging themes, theoretical memos, case studies. Back and forth between the different types of data; using context to interpret and make sense of events and specific practices. *Interpretation by researcher is at the core.*	Emerging themes, theoretical memos, case studies. Difficult sometimes to interpret a situation, an interaction without knowing the specific context of the actors or if they also interact offline. *Interpretation by researcher is at the core.*

This stands in stark contrast with the time and effort involved in negotiating entry, observing and interacting with the "natives" before getting one's bearings, and writing rich texts in an attempt to capture as much of the context as possible in traditional qualitative research. These efforts are offset by the advantages of daily immersion in people's lives and environments and of frequent interaction with the people we study, which in turn contrast with the lack of context for online data (i.e., the lack of offline interaction—or of any kind of interaction—with the members of online communities, participants of virtual worlds or games, authors on blogs, etc., and the lack of familiarity with the nontextual aspects of their lives) that can be a major stumbling block for constructing a meaningful account of online posts.

Whether context comes first or text comes first and whether text is produced mostly by us or by those we study, qualitative research remains grounded in the same interpretative act aiming to

provide meaningful accounts of social practices. Still, the challenge of context posed starkly by the use of online data demands a clear understanding of the relationship between text and context. In the next section, we will use some of the ideas advanced by literary criticism to provide such a conceptualization.

Innovative Approaches for Addressing the Contextual Challenge in Online Qualitative Research

Qualitative researchers examining online settings have addressed the contextual challenge and managed to develop thick descriptions and rich understandings of online practices by developing innovative approaches to collecting and analyzing online data. On the basis of the extent of their reliance on online text, we identify three such analytical strategies—the structuralist, the explanatory, and the "virtual" ethnography (see Table 36.2 for a summary of the different approaches).

Table 36.2 Innovative Strategies for Analyzing Online Data and Exemplars

Analytical Strategy and Exemplar Papers	*Reliance on Online Text*	*Use of Other Data Sources*	*Focus of Analysis/ Phenomenon Studied*
Structuralist			
Vaast (2007, 2013)	Exclusive	None	Online self-presentation and emergence of a new online actor category
Fayard and DeSanctis (2005, 2008, 2010)	Exclusive	None	The emergence of language games in online forums and construction of a shared identity through discursive practices
Explanatory			
Fayard and Metiu (chapters 7 and 8, 2012)	Heavy	Archival (blog posts, interviews posted online, etc.)	How online written exchanges enable knowledge creation and the development of trust among distributed collaborators
O'Mahony and Ferraro (2007)	Moderate to heavy (over 17,000 postings)	Interviews with project contributors; archival (project constitution, manual, charter, etc.)	The blending of bureaucratic and democratic governance mechanisms in an open source community
Virtual Ethnography			
Rheingold (1993)	Heavy	Long-term participant observation, some interviews with community members	How people use online text and interactions to engage in the full range of social activities
Nardi (2010)	Moderate to heavy	Long-term participant observation, interviews and visits with community members	Rich account of the culture of World of Warcraft players in the U.S. and China

The "structuralist"[4] approach relies exclusively on text, with no additional data from other sources. The analysis consists of looking for patterns within the text and considering the text as the sole context for the interactions. This approach has been often used to illuminate phenomena where additional context does not seem needed to develop thick descriptions and rich understandings. For instance, Fayard and DeSanctis (2005, 2008, 2010) did a qualitative discourse analysis of the messages posted by participants in several public online forums on knowledge management. In particular, they examined the emergence and development of specific discursive practices enacted by forum members. Their analysis was grounded solely on the textual analysis of the posts and exchanges that they considered as the main context for the interactions between online forum members; looking at the evolution and structure of the threads and the content and styles of the posts allowed them to unveil the construction of specific language games in each forum.

In one specific study, for example, Fayard and DeSanctis (2010) provided a grounded understanding of the construction of collective identity and culture in two online forums, KM Forum and KM Chapter (pseudonyms) based on their qualitative analysis of 782 messages posted by participants in the two forums over 9 months. Analysis consisted of multiple readings of all the messages with regular discussions between the authors to adjust and refine the emerging analytical dimensions. In these first phases of the analysis, they were surprised by the frequent references to a collective, which created a sense of we-ness. This surprise led them to explore how this sense of we-ness was enacted by the participants—beyond the expressions of collective identity (e.g., use of the collective *we*, references to the group). They then compared and contrasted specific messages and built theoretical categories that served as the basis for the language-game analysis. The focus here was on understanding the emergence of practices within the online forum and thus the text was seen as the main context.

Messages posted online were also the main focus of Vaast et al.'s (2013) examination of the emergence of a new actor category, that of technology bloggers. Analyzing over 1,100 entries of numerous bloggers, the researchers identified the identity claims made and how they were enabled by the Internet medium. They showed how the discursive practices were built in response to continuous evolutions in the media and thus were able to distinguish both identity-enabling and identity-unsettling effects of new media. The analysis proceeded in a grounded fashion by coding the entries and identifying main themes and practices. Throughout the analysis, the researchers interpreted the themes by contextualizing them: They paid attention to how bloggers interrelated with one another, how they reacted to new media developments, and how other actors constructed technology discourses. The blog posts constituted both the text and the context of the analyses, and no complementary data was invoked in the interpretation.

Such studies assume that text provides enough context, or even that text has become the context. This perspective resonates with Sherry Turkle's claim (2011), in her book *Life on the Screen*, that some people playing multiuser dungeon games developed a specific online identity and that their online life "counts" as much or even more than their offline life. In such cases, the "online life" of participating in or online communities becomes the context for the offline interactions.

The explanatory approach[5] still involves a heavy reliance on online text. Yet, to analyze online texts and interpret online practices and interactions, researchers rely on complementary data, understood as the context to which qualitative researchers usually turn when developing their interpretation of practices. Researchers using this approach use a variety of complementary data sources to the online texts posted by the participants: interviews with participants, archival data such as historical monographs and biographies, or participants' own writings. These complementary sources of information are deemed important in explaining online practices by giving researchers some access to the contexts in which these practices occurred.

This is the approach we took in our study of two online communities—openIDEO and open source software development (Fayard and Metiu 2013, chapters 7 and 8). Our aim in these studies

was to investigate the mechanisms at play within the text: how community members either produced knowledge or developed a sense of community through writing. In both cases, we relied heavily on online posts by community members. However, to make sure we understood the particularities of the two online communities while developing our interpretation of the participants' interactions, we resorted to additional knowledge about these settings. For example, Anne-Laure has been a participant observer on openIDEO and has done multiple interviews with community members. While we did not rely specifically on these data in our analyses of the role of writing in developing new ideas and solutions to social challenges by openIDEO members, Anne-Laure's contextual knowledge, observations, and interviews helped us understand better the collaborative process among participants while doing textual analysis of the posts and comments. Similarly, Anca's extensive knowledge of the open source community through her previous work (Kogut and Metiu 2001) and her readings of participants' blogs and books about the community (such as Raymond's [2001] *The Cathedral and the Bazar*) helped us while analyzing the interactions of open source members. We were also helped by a research assistant whose technical knowledge was invaluable in allowing us to grasp some of the technical issues passionately debated in the threads we were analyzing. We also did some research on the key participants involved, as some of them seemed to have a certain status among the community. In both studies, complementary data permitted us to develop a fine-grained understanding of some of the tensions and disagreements we observed in the messages posted by community members.

The need for complementary data usually arises when one realizes that the research question requires more than an exclusive reliance on online data—for example, a surprise emerges from the analysis of the online data, but multiple readings still don't provide any insights or possible interpretation, and complementary data seem needed to develop a deeper understanding of the phenomenon studied. Thus, O'Mahony and Ferraro (2007) examined a wealth of complementary data sources to examine the evolution of governance in an open source software community: 17,317 mailing list postings, 48 interviews with project contributors and users, archival data. Through this triangulation approach, they identified several phases in the project's governance and explained the relationship between this process and the community members' evolving views and interpretations of various concepts of authority.

The virtual ethnography approach consists of deep, long-term immersion in an online environment in order to understand it from the point of view of the natives. Akin to traditional ethnography, this strategy aims to give a rich account of a particular online world. The difference here is that the "context" is not a sociomaterial, collocated world, but a web platform like the WELL or openIDEO or virtual environments where people can create avatars like World of Warcraft or Second Life. Similar to ethnographies of offline environments, this approach relies on a vast array of data sources in order to understand the online practices and environments, including online text, interviews, observation of online and offline interactions and practices, and archival data. The extent to which the researchers rely on online data in their virtual ethnography varies from heavy reliance (e.g., Rheingold in his virtual ethnography of the WELL community) to moderate and light (e.g., Nardi [2010] and Lindtner et al. [2004] who started their examinations of World of Warcraft players by focusing on online text, but then shifted to collecting more and more offline data). As in traditional ethnography, when the researcher finds intriguing, interesting aspects, he or she pursues them by looking for appropriate data sources.

Rheingold's (1993) well-known qualitative study of the WELL is a great example of a virtual ethnography that provided a nuanced, sensitive, and path-breaking account of an online community. Through long-term immersion as a participant observer in the community, Rheingold produced an insightful and in many ways surprising account of the emotional support provided by online community members. Another recent and compelling virtual ethnography is Nardi's (2010) study of the World of Warcraft. For more than three years, Nardi was a participant observer of World of Warcraft

games in both the United States and China. She systematically observed players' behaviors both online and offline and provided a rich account of their culture, motivation, beliefs, and cooperative and addictive conduct.

In virtual ethnographies—similarly to what happens with structuralist and explanatory approaches—text, as produced and interpreted by the participants, is central. The messages posted and commented upon are one of the main data sources used by virtual ethnographers in their effort to develop an understanding of the interactions, emergent meanings, values, and practices enacted by members of an online environment. In virtual ethnographies, the "field" is textual, it is the online environment in which text-based interactions take place and practices are enacted and in which the virtual ethnographer becomes a participant. To this corpus of texts produced by members of the online communities, the researcher adds his or her own texts produced through note-taking and interpreting the natives' texts. Texts and contexts again are deeply intertwined, just as they are in traditional ethnography.

In all three approaches—structuralist, explanatory, and virtual ethnography—the data analysis, as in any forms of qualitative research, is an interpretative act and involves various activities that have been well described in previous methodological work (Becker 2008, Corbin and Strauss 2008, Glaser and Strauss 2009), such as writing notes describing practices observed in the online interactions (i.e., producing researcher-written texts), reading the texts (produced by the members of the community as well as notes produced by the researcher) numerous times, multiplying perspectives to achieve triangulation, and writing theoretical memos during the research. When possible, or perceived as needed (in explanatory and virtual ethnography approaches), researchers might rely on key informants. Informants might in some cases take on the role of "tutors," as was done in the virtual ethnography of an online musical community where Lysloff (2003) relied heavily, in the early stages, on a young composer who taught him a lot about using some of the software used by community members to compose electronic music. The tutor's guidance enabled Lysloff to gain a deep contextual immersion and an understanding of community members' views on creativity and ripping. Here the loop between online and offline seems to close as we find ourselves again interacting with the natives, who teach us the intricacies and routines of their online everyday lives.

When the Frontiers Between Offline and Online Become Blurred

The three innovative strategies identified previously make clear that while text and context vary in their nature and relationships, they are always interweaved and at the center of qualitative research, regardless of whether our data are collected offline or online. Such an intertwinement reflects the important similarities existing between qualitative studies of collocated interactions and online interactions: They provide a meaningful, contextually informed account of social practices; they rely on inductive reasoning; and they are always a written account built on the basis of other texts. In both cases, the interpretative act central to any qualitative approach doesn't change no matter the balance between native- and researcher-produced texts.

The text/context intertwinement central to all qualitative work is particularly important for qualitative researchers to reflect upon as the blurring between online and collocated interactions increases; today, many studies of organizations, even those with no focus on online phenomena, might involve some type of online data in the mundane form of email exchanges or chat messages. As Osterlund et al. (see chapter 37 in this volume) shows, the context often consists of a multitude of documenting practices aimed at tracing otherwise invisible distributed work. Thus, the relationship between text and context, and the innovative approaches developed to address the contextual challenge in online studies, are of interest even to researchers whose focus might not be specifically on online phenomena.

Notes

1 Cartoon by Peter Steiner published by *The New Yorker* on July 5, 1993.

2 Text and context as used by literary criticism are intimately related and their relations have been investigated and debated at length in literary studies. How much of the "context"—in particular its historical context, unpublished materials, correspondence, the life of the author—does one needs to know to analyze and understand a text? Various types of literary critics have emerged depending on their positions on the relations between text and context, ranging from the stance that the text cannot be understood without heavily relying on the context (whether biographical contexts or pretexts like in hermeneutic approach, e.g., Eco 1992; Poulet 1971) to the notion that the text can and should be understood as "stand alone" as suggested by structuralist approaches (e.g., Barthes 1973, 1976; Genette 1976).

3 However, even in traditional ethnographies, full access to the context of the people we study is a myth: No matter how long we stay in the field, we never have access to the "whole" context.

4 Structuralism in literary studies, as its name suggests, focuses on how the structures of the single text emerge and evolve or examines the structure of a large number of texts to discover the underlying principles that govern their composition (e.g., Barthes 1973, 1976; Genette 1976).

5 Explanatory, or contextual, approaches to literary criticism ground their analysis of text on extratextual elements, such as the life of the author, correspondence, and the general historical context.

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