

Critical Incidents Analysis: Mismatching expectations and reconciling visions in intercultural encounters

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Conflicts among stakeholders are common in Community Informatics (CI) research. They often derive from mismatches of expectations and are exacerbated by communication and intercultural issues. Such mismatches are breaking points that might compromise the relationship of trust among stakeholders and, ultimately, project outcomes. In CI, reflecting on moments of conflict and mismatch might help researchers attend to assumptions and interpret aspects of communities' cultural context, as well as their own. This reflection should contribute to a closer connection among stakeholders and sustainable project outcomes. In this paper, we present the Critical Incidents Analysis (CIA) Framework (Brunello, 2015), a tool that was conceived within the Community and Development Informatics field with the aim to reflect upon incidents and misunderstandings among

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stakeholders, their different cultural perspectives, and – eventually – deal with project breakdowns. We apply the framework to our own research, a posteriori, where we analyze conflicts and mismatches of expectations arisen during our fieldwork. We conclude that the CIA framework, applied “a posteriori” to our cases, was a useful tool to better analyze and report on our research, and to recast incidents as opportunities to enable a deeper understanding and build trust among stakeholders.

Introduction

Conflicts among stakeholders are common in research dealing with technologies and people, and as we argue below, they often derive from mismatches of expectations, miscommunication, and misjudgments among project stakeholders and can be exacerbated by cultural differences. Understanding mismatches of expectations and conflicts in CI projects through a reflexive approach can be vital, then, to dealing with sensitivities among stakeholders, fractured relationships, and project failures.

In this paper, we present the Critical Incidents Analysis (CIA) Framework (Brunello, 2015), an original framework of analysis – and action – that is still unused in the field, and that we consider to have good potential to better inform work in CI and Development Informatics (DI) scholarship. CIA was conceived as a tool to reflect upon mismatches of expectations among projects’ stakeholders and to better understand – and even prevent – incidents that might otherwise lead to major project breakdowns. These mismatches are referred to as “critical incidents” within CIA because they can compromise the relationship and trust among stakeholders and, subsequently, the project outcomes.

CIA was originally developed in a cooperation and development project setting entailing a technology program delivered in schools in Burundi within the bilateral Belgo-Burundian cooperation program, where Brunello (2015) started his reflection on stakeholders’ cultural differences and the diversity of contextual frames they were embedded in. The use of the framework enables understanding mismatches of expectations by considering the whole “ecosystem” wherein the research takes place, with a special focus on the relationship among stakeholders in and within the context. Based on our experience in applying the framework to community-based work, CIA is a valuable tool for self-reflection also when researchers face critical incidents in CI projects with smaller cultural and contextual differences. This reflection can be applied mainly in two moments. First, while critical incidents are happening (during fieldwork, the course of a project), prompting researchers to improve their communication with the other parties and steer the incident towards deeper mutual understanding and better project outcomes. Second, a posteriori (after fieldwork is over, after an incident has happened), enabling researchers to reflect on mismatched expectations, better understand incidents and critical moments, and report their work more richly, potentially enabling deeper reflection and transfer of experience to future projects.

We use the CIA framework a posteriori, as a way to “reverse-engineer” (Brunello, 2015, p. 33) mismatches of expectations among the different stakeholders of two research studies conducted by two of the authors - an ethnography of a voluntary community of Syrian students interested in internet and collaboration, and an ethnography on the use of ICTs in Brazilian favelas. While the considered critical incidents were already documented, we highlight how using the framework to run a new, ex post facto analysis on them allowed us to dig deeper into our data and get a better understanding of our research contexts. In addition, we show the value of using the framework to study technology encounters among interlocutors that are considered more homogenous: compared to the cases in which the framework was originally applied, our cases entail somewhat less dramatic cultural distances between researchers and local stakeholders. Yet, they do have differing conventions, power imbalances and divergent interests.

In the next sections, we present the grounds on which the CIA framework was conceived and the need for such an approach in CI and DI studies. Then, we explain how the framework is structured and how it can be applied to CI research projects that deal with qualitative – mainly ethnographic – data. Finally, we explain and discuss the analysis on our cases and implications and benefits of CIA for CI and DI research.

The path to a Critical Incidents Analysis framework

The need for an “ecological approach”

The CIA framework was conceived in response to decades of techno-centric research in the Information and Communication Technologies for Development (ICT4D) field, where ICTs was held as undeniably capable of helping the socio-economic development of marginalized communities. Evidence and success stories supporting that ICTs can improve the conditions of underserved communities have been reiterated as models to draw upon (Unwin, 2009; Weigel & Waldburger, 2004), fueling the hype and concealing the many failures the field has seen (Dodson, Sterling, & Bennett, 2013; Heeks, 2002). Underlying this unquestioned faith in ICTs and technical solutions is a modernization stance and a sense of superiority on part of powerful economic and political actors, whose self-conferred purpose is to bring the – often non Western - “other” to a level the West has set and where, in a hierarchical way, the West is superior (Simon, 2003, p. 17, cited in Brunello, 2015). In this context, ICTs have been considered unquestionably appropriate tools to solve problems that are systemic in given contexts. This principle, which has recently started to be questioned (Brunello, 2010; Nemer, 2016), generated a paradox, where development has been de-humanized and has hindered projects “sustainability” - defined in Brunello’s work using the words of Unwin “as the continuation of the flow of benefits after the exogenous input of resources has ceased” (Unwin, 2009, p. 365). The paradox holds, on the one hand, technological-idolatry - the trust that technology is able and has agency to solve issues it has not caused (Best, 2010; Brunello, 2015; Latour, 2010) – and, on the other, technological determinism (Chandler, 1995) - the effort “to handle development issues by means of technical solutions” (Brunello, 2015, p. 60).

Likewise, growing evidence showing that imported and de-contextualized ICT solutions do not serve the development purposes for which they were conceived has also started

to be reported (Avgerou, 2000; Avgerou & Walsham, 2000). Two kinds of criticism are particularly relevant for understanding the grounds of the CIA framework: First, ICTs are criticized for reinforcing, rather than evening out, existing power hierarchies between stakeholders (Feenberg, 2009; McDermott, 1969; Warschauer, 2004). Second, the set of – Western - values inscribed in ICTs would engender the homogenization of minorities - not their empowerment (Dreher, Gaston, & Martens, 2008; Lange & Meier, 2009). The “ecological approach” (Brunello, 2015) adopted by the framework suggests a way to address and include the local community context in the research “ecosystem”:

In opposition to the technological imperative mindset, my research espouses a social embeddedness approach (Avgerou, 2008, 2010; Latour, 2005) which I define ecological in that it strives to embed all stakeholders in their environment, conceived as an ecosystem. (Brunello, 2015, p. 65)

The term “ecosystem” is here used to underline the systemic interrelationships between ICTs and social actors. The metaphor of the ecosystem refers to the primacy of the relationships among stakeholders and between them and their environment. The term implies an interconnectedness where each element (technology, stakeholders, the context, etc.) is affecting the whole system in which it is embedded, with their power relations, purposes and cultural differences. The term also stresses how Brunello’s perspective is organic, rather than inanimate and technocentric, and considers stakeholders “as actors, political beings striving for power and prestige or even for survival, exploiting the affordances available in their context — physical, socio-economic and cultural — thus leveraging or resisting ICTs as a way to preserve or gain status and agency” (Brunello, 2015, p. 69). “Ecosystem” relates also to the concepts of “sustainability”, as previously defined, and “resilience”, or “the capacity of a system to absorb disturbance and reorganize while undergoing change so as to still retain essentially the same function, structure, identity, and feedbacks.” (Walker et al., 2004, no pagination).

This ecological approach has had a series of applications in development and innovation frameworks, all converging in the understanding that societies are complex interrelated systems, and therefore require systemic approaches and appropriate tools for both designing and assessing interventions for innovation, development and social change (see for instance the framework for evaluating communication for development in Lennie and Tacchi, 2013; and systemic innovation frameworks and Living Labs methodologies, Almirall et al., 2012; Leinen et al., 2012).

The need for an intercultural communication framework

The CIA framework also draws upon studies on intercultural communication. While Brunello mainly adopts an interpretivist approach to observing and analysing culture, he pragmatically suggests moving the analytical lens between both fluid, constructionist notions of culture (Geertz, 1973; Van Stam, 2012), as well as categorical, objectivist notions of culture (Hofstede, 1984; Triandis, 1994, 2000). This enables him to consider cultural phenomena with different degrees of granularity, thus accounting for “the specific organizational culture [in the particular project], as well as for the larger intercultural matrix embedding it” (Brunello 2015, p. 77). Based on this multi-context

view of intercultural interaction, Brunello defines “culture as contexts that travel: we carry with us our distinct way of segmenting and structuring the flow of experience in contexts and meta-contexts so as to orient ourselves through them and interact appropriately, since it is the context that makes the content of an interaction meaningful (Watzlawick et al., 1967)” (Brunello 2015, p. 77).

Brunello then moves to consider mismatches between cultural contexts that orient the interactions of different actors. Differences in socio-cultural backgrounds among stakeholders are frequent in ICT4D and CI research and can undermine their relationships and project outcomes. Intercultural communication can help understanding how people from different cultural backgrounds can perform and develop satisfying collaborations (Samovar, Porter, & McDaniel, 2009). Yet, intercultural communication issues are not frequently addressed in the training of researchers dealing with ICTs in community development projects (Brunello, 2015).

When unexpected or unclear circumstances arise, as in intercultural encounters, people experience anxiety: the less they know about a situation or interlocutor, such as when traveling to a country where a different language is spoken, or body language is different – e.g.: a foreigner trying to understand the different kinds of Indian headshakes, the meaning of the many Italian hand gestures, or a Westerner dealing with private space in the Middle East – the more they will be inclined to rely on heuristics they already know to be able to respond appropriately to unexpected circumstances, thus reducing their uncertainty (Gilbert & Malone, 1995; Gudykunst, 1985, 2005; Hewstone, 1989; Navarro, Arechavaleta, & Olalde, 2010; Zamperini, 1993).

In psychology, such heuristics are considered cognitive shortcuts to compensate for the lack of knowledge about a situation and reduce interaction anxiety (Sclavi, 2003). However, people usually remain unaware of them and do not question them. People, then, remain overconfident about their reliability in understanding or acting upon the uncertain situation (Navarro et al., 2010). Moreover, when intercultural issues cause too much anxiety in the interlocutor, interaction will most likely be avoided and communication minimized (Dumont, Nishida, & Nakayama, 2005). Over time, heuristics tend to crystallize into new “frames”, “becoming a bias” and finally hindering “honest self-expression and recognition of each other’s humanity for the sake of interactional predictability” (Brunello, 2015, p. 79). Miscommunication of this kind among stakeholders might be exacerbated in CI initiatives, which are usually marked by power imbalances and carry implicit assumptions that ICTs are significant for researchers and practitioners alike. Misunderstandings, at this point, might become critical and compromise partnerships and relationships between stakeholders.

Critical Incidents: A definition

The CIA framework deals with “critical incidents”, considering them as strategic to explore and reflect on mismatches of expectations. These moments can occur when we realize that something that we took for granted – and about which we did not discuss beforehand – does not correspond to our expectations. They include both dealing with technological artefacts and discussing with people about how we can use and work with them. Brunello’s most quoted example refers to Belgian funded computer labs in

Burundian schools that were often found empty during school hours. Belgian aid workers were bewildered: to them, Burundian stakeholders had always expressed interest in computer labs and, yet, they were not using them.

Experiencing a critical incident implies a feeling of bewilderment and disorientation. In Brunello's work, a critical incident is defined as "a puzzling mismatch of expectations that has significant consequences on interpersonal relationships, and ultimately on the project outcomes", a "subjective psychological experience of puzzlement that occurs when an interactional frame breaks – in other words, when 'I' realise that what 'I' was taking for granted (e.g. when a hard drive fails it must be replaced) is not shared by my interactant (e.g. when a hard drive fails we stop using that PC) and therefore cannot be taken for granted." (Brunello, 2015, p. 82) Incidents are considered critical when they involve feelings and expectations. Analysing them is relevant to deepen communication and reinforce trust, to interpret project data, to reduce the risk of project failures, and to improve aid effectiveness (Easterly, 2007; Riddell, 2008; Sachs, 2006).

The CIA Framework

The CIA framework breaks down critical incidents to various dimensions, which are contextual, value-related, material, and interest-related. The framework is primarily designed as a tool for detecting critical incidents while they are happening – so as to approach them in a reflexive way and resist the first reaction that leads the researcher to frustration, blaming, subjectifying, resistance, submission, or to attributing the causes of incident to others. However, it can be applied as a reflection tool also *ex post facto*, to better contextualize research data.

Based on insight from research in intercultural communication and social psychology (Lalljee, 1987; Manusov & Spitzberg, 2008), a researcher is prone to take a *dispositional route* whenever they perceive that the critical incident's locus of causality is ascribed to the partnering local actor, and not to the situation or to themselves. The local actor may then be labelled either as under-skilled for the situation or as intentionally evil, deliberately not complying with the expectations. The dispositional route ultimately influences how the researcher perceives local actors, their trust in them and their interactions.

Brunello suggests that an alternative to the dispositional route is the *situational route*. A situational route needs reflexive and ecological thinking, taking into account context, culture, history and stakeholders' different interests. This is achieved by a mindful reflection on the situation while it is happening, abstaining from immediate reaction to the situation in order to be able to look outside the self and identify the contextual elements that might have brought the stakeholders to act that way. This approach would help realizing actions to conserve trust or rebuild it when lost (by apologizing, taking risks together, opening up).

To apply the framework, critical incidents have to be individually analysed and traced back to the mismatching implicit premises from which they derived. This is done by answering to several introspective questions (see Table 1) aimed to elicit expectations,

assumptions and emotions connected to the incidents, and by considering that "I", as a researcher, am involved in the incident, and need to adopt a reflexive and ecological approach. Once researchers have reflected upon these questions, they can organize their thoughts about the incident premises into five analytical dimensions: emotions, attributions, communications, ranking (see grid in Table 2).

Table 1: CIA reflection questions, adapted from Brunello, 2015, p. 161-162

<p>1. Whose expectations were mismatched?</p>	<p>a.Context-related (e.g. in Europe maximum class size is 40 versus in Burundi maximum class size is 140)</p> <p>b.Relationships-related (e.g. I have the right to give you orders versus we are on the same level)</p> <p>c.Technology-related, specifying whether the assumption was related to the instrumental or to the symbolic value of technology (e.g. Computer enable learning versus Computers make us modern)</p>
<p>2. What would have been ‘normal’? What presumptions went unmet?</p>	
<p>3. What was the emotional reaction to the mismatch (i.e. Disappointment, wonder, fear, anger...)?</p>	
<p>4. Whose responsibility (fault/merit) was it? Who should intervene to fix it, if anybody (accountability)?</p>	<p>This reflection is aimed at pinpointing any disconnect between the rhetoric of responsibility, which is directly tied to ownership, and the actual handling of the issue in point.</p>
<p>5. What kind of attitude was enacted? Looking downwards (Mm) or upwards (mM) or peer-to-peer (=)?</p>	<p>This relies on Patfoort’s (2001) work on nonviolent communication for conflict resolution, which asserts that the relational component of a communication can be skewed in the sense of a superiority complex (“Major-minor—Mm”) or of an inferiority one (“minor-Major—mM”) or levelled, on grounds of equality (“=”).</p>
<p>6. How did it affect the existing relationships (trust-mistrust)?</p>	
<p>7. What were the pragmatic consequences of the incident at the four levels, especially at micro and meso levels?</p>	<p>This was meant to distinguish between critical incidents that only affected trust, but did not have an immediate impact on the organizational roles within the project, from those who did, e.g. when a computer lab manager was officially sanctioned.</p> <p>Levels:</p> <ul style="list-style-type: none"> a. Macro (e.g.: Belgo-Burundian bilateral cooperation) b. Meso (e.g.: Computer Labs sub- project) c. Micro (e.g.: School management) d. Nano (e.g.: within the computer lab)
<p>8. Was there any attempt of meta-communicating?</p>	

Table 2: CIA grid (adapted from Brunello, 2015, p. 164)

Premises	<ul style="list-style-type: none"> - Expectation - Perceived reality
Emotion	<ul style="list-style-type: none"> - Gut reaction - Intensity (high-med-low)
Attribution	<ul style="list-style-type: none"> - Whose responsibility? (Fault and justification) - Locus of control (In/out) - Who's to fix it?
Communication	<ul style="list-style-type: none"> - Attitudes (Mm, mM, =) - Effects on relationship - Effects on 'reality' - Meta-communication?
Ranking	<ul style="list-style-type: none"> - On a scale 1-5

Finally, researchers' expectations elicited through this exercise are divided into three categories (Brunello, 2015, p.162):

- a. **context-related** (e.g. In Europe maximum class size is 40 versus in Burundi maximum class size is 140)
- b. **relationships-related** (e.g. I have the right to give you orders versus We are on the same level)
- c. **technology-related**, specifying whether the assumption was related to the instrumental or to the symbolic value of technology (e.g. Computer enable learning versus Computers make us modern)

When facing a critical incident, the researcher needs to deliberately stop and try to see the incident from a different perspective, that includes historical, social, cultural and organizational perspectives. The researcher will proceed to reflect on the incident by going through their ethnographic notes and analysing their own emotional response to the facts. The author suggests that "one has to learn to stay in the puzzlement and welcome embarrassment" (Sclavi, 2003, pp. 185–215, as cited by Brunello, 2015) instead of aiming to self-control. Self-control would be obtained by emotional repression while emotions are here conceived as "precious signals informing us about how we are perceiving what we are perceiving" (Brunello, 2015, p. 301).

I named this framework SBIZO (Stop, Breathe In, Zoom Out) to stress the need for a deliberate effort to pause instead of hurriedly to resort to dispositional heuristics, and to contain emotional discomfort. This is motivated by the axiomatic assumption that there is always a coherence in human behaviour. Consequently, puzzlement and emotional discomfort are interpreted as signals that my cultural grid is not potent enough to recognise such coherence and I

need to search further to find a bridge between my universe of coherence and the Other's. [...] This may require: 1. Explicitly to renegotiate those relationships. 2. Sincere apologies. 3. Taking risks together, thus making 'myself' vulnerable first and staying open until the Other does the same. (Brunello, 2015, p. 296)

By presenting cases from our research experience, we discuss how the CIA framework can be used as a tool in community-based research to reflect on critical incidents and how they relate to relationships between the stakeholders, their interests and expectations, and consequently, research outcomes.

Applying the CIA framework to our own research

As Brunello did with his own work, in this analysis we used the CIA framework to reflect on previously happened critical incidents, *ex post facto*, thus we re-analyzed our data to learn from the incidents happened in the field.

The two researchers directly involved in the cases here narrated were not aware of CIA when conducting their research. Both, however, had to work out some reflexive stance at the time of their fieldwork, and had to find a way to deal with the critical incidents they faced. Also, they both managed to avoid to take a dispositional route, to circumvent the incident before it became a major breakdown for their research, and to preserve the trust of the communities they were working in. However, this came at some cost. The two researchers invested a considerable amount of time and energy trying to understand how to approach the incidents and attempting to meta-communicate, being in some cases taken aback by them and doubting of their own skills and of the possibility of finishing their fieldwork.

Believing that CIA would help approach their cases more systematically, and that it would constitute a tool to understand their contexts and how to approach them more in depth, both researchers engaged in an *a posteriori* analysis of their data (including field notes, online notes and survey instruments). They worked closely with the other three authors in a double circular process of plenary open questions, followed by individual reflections on their data and, again, plenary meetings to share and deepen the CIA-aided reflection on their cases.

Both researchers used, first, the questions provided in Table 1 to reflect and dig into their own cases. Some questions were found more relevant than others (the ones regarding trust, accountability and pragmatic consequences), but all questions were used. The resulting reflections were mapped according to the dimensions offered in Table 2 grid. All dimensions but one (ranking) were relevant and helpful to identify what really happened during the incidents. Finally, the reflections about researchers' expectations were broken down according to the categories proposed by Brunello. Both researchers found out that their expectations mainly fit in the first two (context-related and relationships-related), while they could not identify any technology-related assumption to their cases.

The following section present the results of this iterative process of reflection and (re)writing.

CIA and community-based research experiences in Syria and Brazil

To reflect the ethnographic approach suggested by Brunello, the two cases will be narrated in first person by the two authors that were involved as principal researchers in the projects: Ammar Halabi for the case of a local community in Syria, and David Nemer for the case of the Brazilian Favelas.

Conflict in the VOICI online community

We take this case from Halabi's work with VOICI (an acronym for Voluntary Community), a local learning community of (mostly) student volunteers in Damascus, Syria, between 2012 and 2015. The main body of the observations were made between 2012 and 2014 (see Halabi 2016). VOICI was founded by a couple of active members in 2011, and grew in size and a number of activities in the following years, as members started to organize talks about open source projects, hold collaborative electronics workshops, and gather to write and publish online content in Arabic. By participating with community members while compiling an ethnographic account of their interactions, Halabi sought to learn about their use of ICTs to collaborate and communicate. The researchers in the VOICI project intentionally aimed to minimize cultural distance by working with a group of university students with a close socio-cultural background to that of Halabi. The case, then, is not starkly marked with the same cultural distance considered by Brunello when he developed the CIA framework. In the following, we summarize part of his fieldwork that involved conflict within VOICI.

Halabi narrates: In late 2012, conflict broke out between community members in VOICI. This started after two of the three community founders, along with the majority of the moderators, decided to exclude the third founder (whom I call "Salem" here), and announced forming a new management team in as they started establishing a Hackerspace for VOICI. Simultaneously, the new management team changed the passwords to the domain-and web-hosting services, and retracted Salem's admin privileges from all digital groups and spaces on third-party social services (including Facebook, Flickr, YouTube, etc.). This was a surprise to many of us in VOICI, which until to that point seemed to be rather harmonious, and little signs of disagreement, if any, were at all publicly visible among the moderators.

Immediately after he got blocked from all online spaces, Salem started campaigning online on his personal Facebook wall and on a Facebook group that he created specifically to call for what he considered his rights as a member and moderator. He also started blogging extensively to criticize and discredit the actions against him, and to argue that governance and control should not be concentrated in the hands of few people who were unjust, inexperienced and questionable (I am softening Salem's language a lot here).

The conflict generated intense controversy in the community. Many members objected to blocking Salem out of VOICI's digital spaces. Some requested justification for his suspension, and some attempted to mediate among the involved parties, while others

called for better and clearer governance to avoid these kinds of problems. Teasing out through the CIA framework how different parties viewed their relationship to each other and to the community, the management team argued that they had to exclude Salem from management because he was not consulting with others in making managerial decisions and that he was not duly contributing to the everyday chores of management. They also noted that he was blocking their vision to establish a local Hackerspace as he preferred waiting for a couple of years after finishing his studies abroad.

At the beginning, I was trying to understand the various interests that have played a role in leading to the clash of these two parties. But as I am writing these lines, thanks to a renewed discussion after I read Brunello's work in early 2016, I also came to attend to the role of changing context in shaping these interests of VOCI members, which eventually clashed. Salem, as I just mentioned, since late 2011 moved abroad to follow his studies. After he moved out of Syria, he held a couple of events under the name of VOCI without coordinating with the other moderators in Damascus. This behaviour frustrated the moderators: they perceived it as destabilizing VOCI's image that they associated with Syria, and they felt they were not involved in such strategic decision despite investing considerable time and effort in building the community image, reputation and activities. Furthermore, while the management team considered that Salem did not contribute duly to the chores of management, Salem insisted that he was putting in continuous effort. To my understanding, the kind of work that he was doing was less and less appreciated: since he was distant, he did not contribute to on-ground events, he did not amass new members in Syria (he was charismatic and could convince many people to join when he was in Damascus), and eventually it seems the work that he did abroad to create new VOCI groups was perceived more of a threat than an opportunity to the moderators in Damascus. This case shows that such a local group, where members who can be seen to share fairly similar cultural context and understandings, can be destabilized as members grow apart in distance and get positioned in differing contexts, giving rise to differing circumstances and interests. What Salem thought to be contributing value to VOCI, possibly seemed threatening, abusive of control and indolent to the rest of the management team.

The conflict persisted for almost a year, and was quite hard and disturbing for everyone involved. Thus, there were indeed various attempts to meta-communicate about the problem, and among other VOCI members, I tried to maintain contact with both parties to create a space for communication. Like others who attempted to mediate, I found this very challenging. On the one hand, it was difficult to be positioned between two parties, which I both considered my friends, but still, I kept pushing insistently debating with each of them in order to justify the other party's point of view. In other words, I felt that my views were not satisfying for either party, and each felt at moments that I was defending the other instead of supporting them. As the conflict progressed, my sentiments changed over time. At certain moments, I appreciated the management team's frustration with issues of power and control and their aspiration to take more control over something they were putting lots of effort into. This was especially the case when Salem seemed to me harsh in attacking the reputation of the management team, or in refusing to seize opportunities to reconnect and reconcile when it required compromising some of his conditions. On other occasions, I was compassionate with

Salem, trying to imagine what it could be like to be abruptly suspended, while residing abroad, from a community back at home where he has invested years of his life and held lots of hope for its future, both personally and professionally. To this day, when I get back to the field data and re-read the discussions and interactions that I recorded, I still swing back and forth between these sentiments. This reflects the way Brunello suggests dealing with critical incidents by stopping, breathing-in, and zooming out (SBIZO) to understand the situation contextually and pragmatically. I believe my role as a researcher gave me enough space and resources to attempt it before I knew about SBIZO: it was very time consuming to try talking with everyone and understand their grievances, however, given my position as a researcher, I was willing to invest in this, and I was in a safer position since I was less concerned about losing face (while still being concerned about preserving good terms with both parties).

So, while opening any space for discussion and negotiation was difficult, I felt that at some moments this dynamic of SBIZO (opening up and trying to reconcile the different stakeholders' views) could contribute to bringing the parties in contact together. However, those moments in the case of VOCI were brief. We could not overcome the differing sets of conditions that each party wanted as a pretext to agree on discussing with each other. The management team, while admitting that blocking Salem was a mistake, insisted on their decision to reduce Salem's privileges as a moderator, and offered to return him as a regular member after discussing with him in private. Salem, on the other hand, demanded to be returned to his full status as founder and moderator unconditionally, discredited the authority of the management team, and wanted any discussions to be public in order to guarantee their fairness and to debunk the false arguments against him.

There is much more to say about the conflict (for a fuller account, see Halabi, 2016), but I will close with one final idea inspired by CIA's attention to how two involved parties come to frame the reality of what happened and what should happen. As the conflict lingered on, the two parties mobilized different discourses to justify certain positions and to push towards certain outcomes. For example, while Salem argued at length that the spirit of a collaborative community should not admit certain selected members as "managers", the management team argued that while Salem's rhetoric seems plausible, practical experience showed them that there are people more invested, interested, or qualified than others in the community to handle its management (that is, them, being the most invested and experienced). In my attempts and role in trying to mediate, I was also mobilizing a certain discourse – one that was seemingly pragmatic, interpretivist, and sought to zoom out to view people and interests in relativistic terms, perhaps at moments annoying to both parties as if attempting to be impartial and avoiding taking sides. In a sense, while all of us understood, adopted, and referred to various ethos and cultural frames at various times (e.g. open-source culture, pragmatic management, or an interpretive and relativist perspective), we were mobilizing certain discourses with different values attached to them at different times, and in a way that cannot be untangled from our positions and interests.

Surveying in Brazilian Favelas

The second case presents an incident that occurred during an ethnographic study on the use of ICTs by Favela (urban slums) residents in state-sponsored Telecentres (Nemer, 2015). Favelas are mostly inhabited by people from marginalized social classes and referred as "subnormal agglomerations" and zones of social abandonment. Favela residents get poor services for their basic needs, such as health and education, as well as low access to technology and the internet (Nemer et al., 2013).

Nemer narrates: I conducted this study in two phases. In the first phase, I did an ethnographic exploratory study of the field, in which I intended to understand the problematic regarding digital inequalities and inclusion in the neighbouring favelas of Gurigica, Bairro da Penha, Itarare, and Sao Benedito, in Vitória, Brazil. During this phase, I was able to gain access to the neighbouring favelas, despite drug cartels usually disapproving outsiders in their territory. In the second phase, I conducted a more specific ethnographic study of the favelas and telecentres. Data for the study were generated through participant observation, in-depth and semi-structured interviews with telecentre users, and a survey deployed in fourteen telecentres.

I decided to start off my ethnographic study in phase two by deploying a survey; I followed Sieber's (1973) suggestion that surveys are a good method to have an initial and general sense of the field. My goal was to gain a general idea of favela's residents experiences and use of technology. However, I considered this attempt a complete failure due to my inability to communicate effectively with my participants. The survey pilot unravelled the difficulties in communicating effectively with the residents in the favelas. I standardized the pilot instrument to present a number of first person statements, with which the respondent would indicate a level of agreement or disagreement. The participants were confused by the survey questions because they were not certain if the questions were directed at me (since I was reading them) or at them. Respondents were also puzzled when I asked questions related to technology. For example, when I asked them "I use the following social networking sites" or "I have a laptop or personal computer at home" they looked at me confused as if I was speaking a different language, which in a sense I was.

I was aware of some of the differences of power and status that my background would bring into the favelas: male and upper class, but did not expect that the use of language and register was going to be a barrier. In this critical incident related to the implementation of the survey, my expectations were mismatched due to context-related issues: since I am from Vitoria, and so were the participants, I believed that communication was not going to be an issue since we all speak the same language, which is Portuguese.

Favelas have been marginalized from urban cities since their beginnings, therefore their residents developed their own ways of communicating, epistemology and cultural norms; I was supposed to know such differences but instead I took them for granted. My lack of knowledge of favela customs, slangs, terms and communication patterns, did not allow me to engage in quick chats or perform activities that did not involve deep

conversations, such as surveys. I first felt disappointed at myself - while I based the corpus of my research on postcolonial theories and literature, I still behaved as if language between two different places wouldn't matter just because they are in the same space (city). The people in these two places used different terms, slangs, pace and intonation in their daily language. The second emotional reaction was fear- I was really afraid that I was not going to be able to ever talk to favela participants, which would compromise my research and my plan to advocate for funding from the state for the Telecentres.

As mentioned above, in retrospect I consider it a fault not anticipating such language barrier, which enacted an attitude of estrangement among the participants. In the beginning, when I first deployed the survey, I was already perceived as an outsider by favela residents, and my choice of words made such perception worse since it broke my initial connections with the participants. Pedro, 18 years old, once complained:

“The way you talk is very weird and strange, I don't understand. I'm sorry but I have to go. Maybe we can talk later.”

Which we did not for another two months. Pedro's complaint is a good example of the overall feeling among other participants. Since I could not communicate efficiently with favela residents, I felt that they did not trust me or want to engage in conversations with me.

Once I identified this communication issue, I stopped surveying favela residents and attempted to alleviate such barriers. I reflected on my PhD training and decided to engage in conversations with them by following what Rubin and Rubin (2011) referred to as “conversational partners”: I attempted to listen to the participants with an open heart and mind, and kind reception to what they had expressed and told. My motivation was not to judge them, but rather to understand them and learn from them - especially their language and register. Such attitude subscribes to the art of listening sympathetically, in which the researcher is actively thinking about what is being expressed and deeply engaged in mind. This dynamic helped me avoid the rigid back and forth replay of question-answer-question that is conventionally conducted in surveys (Madison, 2011).

Three months into the second phase and after getting acquainted with local communication patterns and terms, I designed a new survey and deployed with the assistance of Telecentres' Inclusion Agents - who were from the favelas. The new survey was designed to better fit the context of the favelas in terms of avoiding misunderstandings with its questions and goals. I adapted the questions to fit the residents' vocabulary and the use of the second person. For example, the newer version included questions such as “Do you have a Face [Facebook]?” and “Do you have a note [from notebook which means laptop]?”

The primary rationale was to make complex statements more natural: I anticipated that including clear references to an informal “you” (você) in each statement would make the surveys clearer. Then I observed that the confusion over the second-person reference

was very rare: On only one occasion did a respondent feel the need to clarify that the statement referred to them, and in no case did their interaction with me indicate that they had interpreted the question to be related to anyone else.

Once I was past the language barrier, another issue emerged: the survey was designed to have a seven-point Likert scale, and as I observed, participants often felt lost and unable to choose their answers precisely - they felt overwhelmed. Then, I decided to reduce the number of responses to five.

During the administration of the survey, I noted on multiple occasions that even the five-point version seemed to confuse respondents. About half the time respondents continued to give a simple answer such as “Yes” or “No” throughout the survey administration, requiring me to clarify the degree of agreement or disagreement, which this time I was able to do. Even though there was a mismatch of expectation on the Likert scale and responses given by the participants, I did not consider it a critical incident because the momentary connection between the participants and I was not broken. I was able to use their communication patterns to explain the survey, engage in conversations, and build trust instead of having them quitting the conversation and leaving the research.

In this case, surveying in the favelas, I acted in a way aligned to the premises underpinning the critical incident framework, since I sought to recognise the incident without attributing the causes to the favela residents. Instead, I stopped surveying, and “stepped out” in order to reflect and understand the critical incident. Once I recognized that I was the one responsible for causing the incident and the mismatches, I was also able to open up to learning communication patterns new to me, which allowed me to engage in conversations, re-establish trust and deploy the survey.

(end of Nemer’s narrative)

Discussion and Conclusions

In this article, we applied the CIA framework (Brunello, 2015) to two cases coming from our own research experience in CI projects. The difference between the original application of CIA and its application to our own research cases, where cultural differences were not so striking, seemed a big leap initially. However, we realized that the CIA framework is a valuable tool for self-reflection also for CI projects encompassing less pronounced cultural and contextual differences. The ecological approach used in the framework, where researchers and stakeholders are embedded in a complex, multi-layered context, and where they develop and evolve relationships, was useful to better understand *ex post facto* (or “reverse-engineer”) what the experienced mismatches of expectations meant for the researchers and within the projects, opening up insights and new questions.

Of course, such distinctions should be taken with a grain of salt: there is no strict measure stick to estimate cultural distance (nor would it make much sense for our purpose). Even more, one could argue that a Syrian researcher with a background in computer science might feel more at home working with Burundians in a computer lab

than with workers in a phosphate mine in his own country, and the interpretation and representation of culture is always fuzzy, partial, evolving, and open to various views and positions. By making this move towards analysing any encounter through a lens sensitive to intercultural communication, we subscribe to a notion of culture and cultural difference that admits locality, hybridity and contingency. Furthermore, any representation of culture (a dance, a statement by an informant, an ethnographic account) necessarily hinges on the author/performer of that representation. This, we read, is an underlying orientation in Brunello's work. Invoked this way, the CIA framework helped us externalize several aspects in our cases, including some of the differing positions and worldviews, power imbalances, and potentially diverging interests.

In the first case presented, Halabi shared a very similar socio-cultural background with the online community members, even if he was observing the facts from a different geographic setting (which added some distance). When using the CIA framework, Halabi was prompted to open up to reconcile the different stakeholders' views and to understand people and interests in relativistic terms. This led him to understand that stakeholders mobilized certain cultural references with different values attached to them at different times, and in a way that strictly entangled with their own interests. Considering the various interests at play and trying to put himself in the other parties' shoes, Halabi applied intuitively the SBIZO recommendations: Stopping, breathing in, and zooming out. This seemed to help, but only up to a certain point, especially because the researcher was dealing with many stakeholders, each one with their own interest. Thus, even when stakeholders, including the researcher, are culturally not so far away from each other, when subject to different interests and pressures they are likely to rely on different cultural frames to argue and justify their choices. We would like to underline, here, that one of the benefits of CIA is precisely identifying the diverging interests and frames of reference that underlie certain expressions. We reckon that, being equipped with knowledge about CIA would have helped Halabi investigate more in depth and take into account what the conflicting parties cared for.

Also in the case of the Brazilian favelas, Nemer came from a cultural background that is not so distant from the one of his project participants. Yet, some underlying layers of cultural distance between Nemer and the favela inhabitants played a role in their interaction and were the cause of mismatched modes of communication, language, register and interests: participants came from different socio-economic backgrounds, they were favelas inhabitants, whereas Nemer had access to education and opportunities seldom afforded by favela dwellers. Moreover, Nemer is a researcher schooled in Western schools of thought. Despite his willingness to work within postcolonial frameworks and minimise cultural distance, Nemer employed a very specific jargon when conducting the study. Thereafter, dichotomies between favelas inhabitant vs. a non-inhabitant, and insiders vs. outsiders persisted. When their expectations were mismatched, Nemer was at first taken aback and disappointed. A graduate student at the time, Nemer was schooled mainly through readings of successful research. As graduate students, only very rarely we think that things go wrong during fieldwork, and we tend not to know how to deal with the situation when we finally face it. Nemer was then able to recognize there was something wrong in the communication process with the favela

dwellers, and to understand that he had given for granted that a similar cultural background was shared between him and them. Basically, Nemer also intuitively stopped, breathed in and zoomed out, and took a situational route instead of a dispositional one. Applying CIA as an *a posteriori* reflection helped, first of all, to better understand fieldwork dynamics. Also, it helped Nemer understand that mismatches of expectations and mistakes or assumptions are a quite common experience during fieldwork and, as such, they *can* and *should* be addressed, as they are precious sources of information on our contexts and stakeholders. Thus, not only CIA helps bringing different elements - relationship with research participants; accounting for phenomena as ecological on multiple levels, and looking at people, organizations, as well as structures and materials as actors - much more vividly to the surface, it also helps in embracing heterogeneity and tension as intellectual and discursive resources to reach understanding and align actors, instead of concealing them. Being equipped with knowledge about CIA would help researchers also to better deal with the emotional dimension, which, during fieldwork, can be quite overwhelming, especially is experienced by a young researcher. Instead, CIA reckons the importance of emotions as integral parts of the research process, and suggests tools and structures— SBIZO and the questions in Table 1 and 2 – to make sense of it.

Juxtaposing the two cases by Halabi and Nemer provokes a question: how could Nemer manage to find a way to rebuild trust among parties involved (himself and the survey participants), while Halabi did not manage to convince his fellow moderators to come to terms by trying to expose presumptions and positions? Can we consider that another, more skilled mediator than Halabi would have been able to bridge between the conflicting parties by better explicating their worldviews? Or should we consider that the core problem was not related to a lack of mutual understanding, but to inherently conflicting interests? While this certainly merits further analysis of the roles of various actors and the nature of the critical incidents involved, this brief comparison suggests that it is hardly clear-cut to determine when a mismatch is due to cultural conventions and interpretive frames versus inherently different interests – at many moments these aspects are closely connected. The comparison also questions how far mutual understanding and common frames of interpretation can hold interlocutors together. In other words, we suggest that seeking better means to communicate, which the CIA framework addresses, is necessarily a part of a larger project that involves negotiation and aligning interests and stakes among stakeholders.

We reckon that applying the CIA framework was beneficial to our research for two main reasons: First, as a tool to report cases, the framework allowed us to reflect back when writing our cases, adding nuance and transparency to the account, and presenting it as a realistic endeavour characterized by friction, negotiation, disappointments, emotions, and (when lucky) reflection and harmonization. Reporting in this way led us to work with richer data than when presenting as a linearly rational sequence from cause (observation) to effect (design or design implications). Also, adopting a personal voice in the narrative reflected the subjectivity and locality of our accounts. We believe this is of paramount importance in CI and DI endeavours, where questions of accounting for power relations and interests between the researcher/practitioner and the framed informant/beneficiary, while central, are still generally addressed with a rather

deterministic, all-knowing tone (see Bardzell and Bardzell's drawing on feminist studies to counter the "view from nowhere" in studying people and designing technologies, 2011). Second, the framework served as a tool to recast incidents as opportunities. By reflecting on critical incidents and understanding them from different angles, what started as a problem can become an opportunity that enables deeper understanding and building trust. This is supported by studies on conflict analysis – conflicts solved in ways that harmonize the interests of the involved parties are seen as possible ways to tighten group ties and trust; and on conflict resolution - mediators often seek to reframe conflicts in a new light to explore mutual interests and possibilities for mutual gain, thus channelling the conflict towards a resolution that could turn into a lasting relationship. Further research on our accounts will show how we, as CIA researchers, will now deal with critical incidents in the field.

The CIA framework can be considered an addition to the critical and reflective traditions in socio-technical research and design, preoccupied with acknowledging and dealing with subjectivity and subjective experience (Harrison et al., 2011), alongside approaches such as autoethnography (Allen and Piercy, 2005; Ellis and Bochner, 2000). It has long been argued that researchers bring to their work sets of values, assumptions, and pre-conceived ideas that can carry bias and affect findings or any actions or design based on those understandings. This is particularly important in CI and DI contexts, marked by either or both cultural difference and interaction with groups and communities where specific cultural frames are shared and reinforced, and where critical incidents such as those we described can make or break relationships or entire projects. Adopting self-reflexion and critical thinking can enable researchers to create a protective space against espousing thinking, attitudes, and behaviours that can be disruptive for the project and participants.

The value of the CIA framework stands, then, in embracing a perspective that conflates an ecological and an intercultural communication framework, which affords rich and nuanced understandings of CI and DI contexts. At the same time, just like other approaches and frameworks that seek to systematise ways of minimising subjectivity bias focusing mainly or uniquely on the researcher, the CIA framework remains a tool with limited use. Since it focuses unilaterally on the researcher, any attempts to expand the benefits of self-analysis and self-reflection or critical assessment of situations to communities remain tied to the agency of the researcher. Thus, power differences in CI contexts remain largely unchallenged. This is, unless we attempt to imagine the CIA framework not (only) as a tool for researchers and designers schooled in Western schools of thought and breaking grounds in new territories, but as sets of tools that can support different categories of stakeholders in CI projects to come to grasps with challenging moments and situations and using them as moments for reflection and improved understandings of self and others, rather than fissures leading, potentially, to ruptures, crisis, and conflict.

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powerful *a posteriori* tool, which we wish we knew about when conducting our fieldwork. While this new knowledge is now with us, we hope we will be able to bring Paolo's work to the attention of other researchers, so that they will be able to have this tool at their disposal while conducting fieldwork.

References

- Allen, K., & Piercy, F. (2005). Feminist Autoethnography. In D. Sprenkle & F. Piercy (Eds.), *Research Methods in Family Therapy* (pp. 155–168). New York, NY, USA: The Guilford Press.
- Almirall, E., Lee, M., & Wareham, J. (2012). *Mapping living labs in the landscape of innovation methodologies*. *Technology Innovation Management Review*, 2(9), 12. Retrieved from <http://timreview.ca/article/603>
- Avgerou, C. (2000). Recognising Alternative Rationalities in the Deployment of Information Systems. *The Electronic Journal of Information Systems in Developing Countries*, 3. Retrieved from <http://www.is.cityu.edu.hk/staff/isrobert/ejisd3/3-7.pdf>
- Avgerou, C. (2008). Information systems in developing countries: a critical research review. *Journal of Information Technology*, 23(3), 133–146. Retrieved from <https://link.springer.com/article/10.1057/palgrave.jit.2000136>
- Avgerou, C. (2010). Discourses on ICT and Development. *Information Technologies & International Development*, 6(3), 1–18. Retrieved from <http://www.itidjournal.org/index.php/itid/article/view/560>
- Avgerou, C., & Walsham, G. (2001). *Information Technology in Context: Studies from the Perspective of Developing Countries*. Ashgate Publishing.
- Bardzell, S., & Bardzell, J. (2011). Towards a feminist HCI methodology: Social science, feminism, and HCI. In *Proceedings of the 2011 Annual Conference on Human Factors in Computing Systems (CHI '11)* (pp. 675–684). New York, NY, USA: ACM Press. <https://doi.org/10.1145/1978942.1979041>
- Best, M. L. (2010). Understanding Our Knowledge Gaps: Or, Do We Have an ICT4D Field? And Do We Want One? *Information Technologies & International Development*, 6(SE), 49–52.
- Brunello, P. (2010). ICT for education projects: a look from behind the scenes. *Information Technology for Development*, 16(3), 232–239. <http://dx.doi.org/10.1080/02681102.2010.497275>
- Brunello, P. (2015). *Broken Premises: Towards an Intercultural Understanding of Bilateral Cooperation in ICT for Education in Burundi* (Doctoral dissertation). Royal Holloway University of London, London, UK. Retrieved from [https://pure.royalholloway.ac.uk/portal/en/publications/broken-premises-towards-an-intercultural-understanding-of-bilateral-cooperation-in-icts-for-education-in-burundi\(ed7d06ce-047b-4039-a342-5500223842ad\).html](https://pure.royalholloway.ac.uk/portal/en/publications/broken-premises-towards-an-intercultural-understanding-of-bilateral-cooperation-in-icts-for-education-in-burundi(ed7d06ce-047b-4039-a342-5500223842ad).html)
- Chandler, D. (1995). *Technological Determinism*. Retrieved August 4, 2016, from <http://visual-memory.co.uk/daniel/Documents/tecdet/>

- Dodson, L., Sterling, S. R., & Bennett, J. K. (2013). Considering Failure: Eight Years of ITID Research. *Information Technologies & International Development*, 9(2), 19–34. Retrieved from <http://itidjournal.org/index.php/itid/article/view/1050>
- Dreher, A., Gaston, N., & Martens, P. (2008). *Measuring Globalisation: Gauging Its Consequences* (2008 edition). New York: Springer.
- Duronto, P. M., Nishida, T., & Nakayama, S. (2005). Uncertainty, anxiety, and avoidance in communication with strangers. *International Journal of Intercultural Relations*, 29(5), 549–560. Retrieved from <https://doi.org/10.1016/j.ijintrel.2005.08.003>
- Easterly, W. (2007). *The White Man's Burden: Why the West's Efforts to Aid the Rest Have Done So Much Ill and So Little Good* (Reprint edition). New York: Penguin Books.
- Ellis, C., & Bochner, A. (2000). Autoethnography, Personal Narrative, Reflexivity. Researcher as Subject. In N. Denzin & Y. Lincoln (Eds.), *Handbook on Qualitative Research*. Second Edition (pp. 733–768). Thousand Oaks, Sage Pubs.
- Feenberg, A. (2009). Critical Theory of Technology: An Overview. In G. J. Leckie & J. E. Buschman (Eds.), *Information Technology in Librarianship: New Critical Approaches* (pp. 31–34). Westport, CT, USA: Libraries Unlimited.
- Geertz, C. (1973). Thick Description: Toward an Interpretive Theory of Culture. In *The interpretation of cultures: selected essays* (pp. 3–30). New York: Basic Books.
- Gilbert, D. T., & Malone, P. S. (1995). The correspondence bias. *Psychological Bulletin*, 117(1), 21–38. Retrieved from <http://psycnet.apa.org/doi/10.1037/0033-2909.117.1.21>
- Halabi, A. (2016). *Designing ICTs for Conflict in Local Voluntary Communities*. University of Fribourg, Fribourg.
- Harrison, S., Sengers, P., & Tatar, D. (2011). Making epistemological trouble: Third-paradigm HCI as successor science. *Interacting with Computers*, 23(5), 385–392. <http://doi.org/10.1016/j.intcom.2011.03.005>
- Heeks, R. (2002). Information Systems and Developing Countries: Failure, Success, and Local Improvisations. *The Information Society*, 18(2), 101–112. <http://dx.doi.org/10.1080/01972240290075039>
- Hewstone, M. (1989). *Causal Attribution: From Cognitive Processes to Collective Beliefs*. B. Blackwell.
- Hofstede, G. (1984). *Culture's Consequences: International Differences in Work-Related Values* (Abridged edition). Beverly Hills: SAGE Publications, Inc.
- Lalljee, M. (1987). Attribution theory and intercultural communication. In K. Knapp, W. Enninger, & A. Knapp-Potthoff (Eds.), *Analyzing Intercultural Communication*. Berlin: Walter de Gruyter.
- Lange, H., & Meier, L. (Eds.). (2009). *The New Middle Classes: Globalizing Lifestyles, Consumerism and Environmental Concern* (2009 edition). Dordrecht ; New York: Springer.
- Latour, B. (2005). *Reassembling the Social: An Introduction to Actor-Network-Theory*. Oxford; New York: Oxford University Press.
- Latour, B. (2010). *On the Modern Cult of the Factish Gods*. Duke University Press.

- Leminen, S., Westerlund, M., and Nyström, A. G. (2012). Living Labs as open-innovation networks. *Technology Innovation Management Review*, 2(9), 6-11. Retrieved from <http://timreview.ca/article/602>
- Lennie, J., and Tacchi, J. (2013). *Evaluating communication for development: A framework for social change*. Routledge.
- Madison, D. S. (2011). *Critical Ethnography* | SAGE Publications Inc. Northwestern University, USA: Sage.
- Manusov, V., & Spitzberg, B. (2008). Attribution theory: Finding good cause in the search for theory. In D. O. Braithwaite & L. A. Baxter (Eds.), *Engaging theories in interpersonal communication: Multiple perspectives* (pp. 37–49). Thousand Oaks, California: SAGE.
- McDermott, J. (1969). *A Special Supplement: Technology: The Opiate of the Intellectuals*. Cambridge, Massachusetts.
- Navarro, S. P., Arechavaleta, L. de, & Olalde, B. (2010). Heuristic Reasoning and Beliefs on Immigration: An Approach to an Intercultural Education Programme. *Intercultural Education*, 21(4), 351–364. <http://dx.doi.org/10.1080/14675986.2010.506701>
- Nemer, D. (2015). *Rethinking digital inequalities: The experience of the marginalized in community technology centers*. Indiana University.
- Nemer, D. (2016). Rethinking social change: The promises of Web 2.0 for the marginalized. *First Monday*, 21(6). <http://dx.doi.org/10.5210/fm.v21i6.6786>
- Nemer, D., Gross, S., & True, N. (2013). Materializing digital inequalities: the digital artifacts of the marginalized in Brazil. In *Proceedings of the Sixth International Conference on Information and Communications Technologies and Development: Notes-Volume 2* (pp. 108-111). ACM. <https://doi.org/10.1145/2517899.2517915>
- Riddell, R. C. (2008). *Does Foreign Aid Really Work?* Oxford: Oxford University Press.
- Rubin, H. J., & Rubin, I. S. (2011). *Qualitative Interviewing: The Art of Hearing Data* (3rd edition). Thousand Oaks, Calif: SAGE Publications, Inc.
- Sachs, J. (2006). *The End of Poverty: Economic Possibilities for Our Time* (Reprint edition). New York: Penguin Books.
- Samovar, L. A., Porter, R. E., & McDaniel, E. R. (2009). *Intercultural Communication: A Reader*. Cengage Learning.
- Sclavi, M. (2003). *Arte di ascoltare e mondi possibili. Come si esce dalle cornici di cui siamo parte*. Milan, Italy: Bruno Mondadori.
- Sieber, S. D. (1973). The Integration of Fieldwork and Survey Methods. *American Journal of Sociology*, 78(6), 1335–1359. <https://doi.org/10.1086/225467>
- Simon, D. (2003). Dilemmas of development and the environment in a globalizing world: theory, policy and praxis. *Progress in Development Studies*, 3(1), 5–41. <https://doi.org/10.1191/1464993403ps048ra>
- Triandis, H. C. (1994). *Culture and Social Behavior*. New York: McGraw-Hill Humanities/Social Sciences/Langua.
- Triandis, H. C. (2000). Culture and Conflict. *International Journal of Psychology*, 35(2), 145–152. <http://dx.doi.org/10.1080/002075900399448>

- Unwin, T. (Ed.). (2009). *ICT4D: Information and Communication Technology for Development*. Cambridge, UK: Cambridge University Press.
- Van Stam, G. (2012). *Context and Culture affect ICT deployment, a case from rural Africa*. Guest Lecture, School of Humanities for the Master of Communication and Information Sciences, Tilburg University, The Netherlands.
- Walker, B., Holling, C. S., Carpenter, S. R., & Kinzig, A. (2004). Resilience, adaptability and transformability in social–ecological systems. *Ecology and Society*, 9(2). Retrieved from <https://www.ecologyandsociety.org/vol9/iss2/art5/>
- Warschauer, M. (2004). *Technology and Social Inclusion: Rethinking the Digital Divide*. MIT Press.
- Weigel, G., & Waldburger, D. (Eds.). (2004). *ICT4D: Connecting People for a Better World*. Berne: Swiss Agency for Development and Cooperation (SDC) and the Global Knowledge Partnership (GKP). Retrieved from https://www.eda.admin.ch/content/dam/deza/en/documents/About_SDC/resource_en_228184.pdf
- Zamperini, A. (1993). *Modelli di causalità: introduzione alla teoria dell'attribuzione con glossario dei concetti chiave*. Milano: Giuffrè.