The concatenation of meaning and power: A photo-essay of asymmetries in the communication process

Paper Category: Research Paper

ABSTRACT

Informed by the assumption that meaning and power constitute an inextricable dyad, this photo-essay scrutinizes their influence on the communication process. The investigation relies on pictorial evidence of individuals, objects, and actions that embodied the social construction of meaning and manifested power relations in a rural context. The analysis reveals that the traditional asymmetry in the communication process, whereby those in dominant positions controlled the vertical flow of information, was altered when computer technology was introduced in 2003. New asymmetries emerged when ordinary folks, bypassing the established vertical communication channels, became consumers and producers of now available digital information. As a result, vertical and horizontal communication asymmetries now coexist. Besides supporting this argument, the photographic material shows idiosyncratic elements of social reality in a vivid way.

Keywords: Photo-essay, communication, meaning, power, rural context

INTRODUCTION

The story began 10,000 years ago in the northern Peruvian Andes. It is the story of communication. Back then, people resorted to whatever devices they had at hand to communicate information. Throughout the years, the artifacts have changed while the need to convey information remains the same.

This photo-essay analyzes the evolution of communication practices in a rural context since the time of its early inhabitants until the first few years of the twenty-first century. I do not purport to present a thorough historical account but to offer a singular interpretation of the communication process that different groups that have inhabited the region practiced – from rock painting to computer-mediated information. My extended time in the field, as part of an information and communication technology for development (ICT4D) study on the mechanisms of computer-mediated information dissemination in a rural context (cf. Díaz Andrade &

Urquhart, 2009, 2010a, 2010b), allowed me to observe patterns of association, without implying any cause-effect relationship, between producers of meaning and their prominent position. Accordingly, this photo-essay materializes my reflections on how the introduction of computer technology in communities, which have been historically disenfranchised, can reproduce traditional forms of hierarchical communication that reinforce the position of powerful players and simultaneously create new communicative relationships among members of the community. In the analysis of the pictorial evidence, I pay special attention to the dynamic interplay between systems of symbols – henceforth meaning – and power relations – henceforth power – in the communication process. Thus, the research question that this photo-essay seeks to answer is:

> *How does the interplay between meaning and power influence the communication process in rural communities?*

Following this introduction, in the next section, I provide the theoretical foundations that inform my analysis, first presenting a discussion of the communication process and, second elaborating on the interplay between meaning and power. The third section explains the methodology and justifies the photo-essay as a method. The fourth section explains the research context, while the fifth one scrutinizes the interplay between meaning and power in the communication process. The sixth section presents a discussion of the results. The last section presents the conclusions of this study.

THEORETICAL FOUNDATIONS

The basic assumption guiding this study is that information has always been a critical component in shaping and organizing social life. Information is not more important now than before. "Modern societies have been 'information societies' since their beginnings," asserts Giddens (1987, p. 27). Communication materializes the sharing of information. Understanding the communication process requires paying attention to the dynamic interplay between the construction of meaning and the exercise of power (Foucault, 1994d). Next, I elaborate on the intricacy of communication, meaning, and power.

Communication

Communication plays a crucial role for sanctioning order in social life. Communication provides the means for information to jump from mind to mind helping individuals cope with their lives

by reducing ambiguity (Dervin, 1977). In the absence of communication "men wouldn't be able to live, or their lives would be precarious, poverty-stricken, and perpetually threatened" (Foucault, 1994b, p. 319).

Communicating information is a social activity that entails the participation of actors, who construct "cognitive bridges across [information] gaps" (Dervin, 1989, p. 223), and are simultaneously consumers and producers of information situated in a specific temporal and spatial context (Taylor, 1991). Communicating information represents a "deliberate sending of specific messages, explicit encouragement or discouragement of certain action, and intervention in or demonstration of various behaviors" (King, 1994, p. 4). As such, the communication process constitutes an instance of social action because the sender of information has the intention to convey meaning in a way that orients the behavior of the receiver (Weber, 1947). Thus, intrinsically personal actions that have ostensive symbolic referents constitute social actions. For instance, the mere presence of a police officer in uniform may alter the behavior of passers-by.

The previous discussion reveals that the communication process is a materially and socially mediated goal-oriented practice (Engeström, 2015). Its material properties are manifest through the conventions – e.g., language, symbols – and technical artefacts – e.g., paper, radio signals – that humans use to exchange meaning. Producing and conveying meaning that governs social action and interaction heavily relies on technical artefacts as much as the latter owes its existence to the former (Miettinen, 1999). The communication process is socially mediated because it does not happen in the vacuum; it requires a scrutiny of the social practices that govern the distribution of information (Kapitzke, 2003) and an analysis of the contextual factors on which it takes place (Chatman, 1996, 1999; Fisher, Landry, & Naumer, 2007; Savolainen, 2008). Eventually, the construction of social meaning emanates through socialized communication (Castells, 2009) in its different forms, whether one-to-one, one-to-many, many-to-many or a combination of any of them.

The arrival of computer technology has not modified the intrinsically situatedness nature of the communication process (Lamb & Kling, 2003). While information technology can bring easy access to and enhance the opportunities for information production and dissemination

(Brynjolfsson & McAfee, 2014), social relations invariably shape the consequences of computer-mediated information (Brown & Duguid, 2002; Kallinikos, 2006).

Meaning

While communicating meaning orally has the benefit of immediacy (Kress, 2003), it is strikingly ephemeral. A word disappears as soon as is uttered. The introduction of recordable symbols, in particular written language, and the technologies supporting it, made possible the communication process to happen regardless of the presence of the originator of the message. Foucault (Foucault, 1994c) grants writing a prominent role in the social construction of meaning and the embracing of socially accepted rules: "writing constitutes an essential stage in the… fashioning of accepted discourses, recognized as true, into rational principles of action" (p. 209).

Throughout history, humans have strived to inscribe information into formalized conventions (e.g., petroglyphs, text, ideographs) using technical resources (e.g., papyrus, posters, electronic devices). Inscribing information makes possible traversing the abstract nature of its content (Sokolov, 2010). In this sense, the use of symbols makes possible the separation between meaning and how it is formulated (Kress & Van Leeuwen, 2001). For instance, a red octagon-shaped sign with the inscription 'STOP', a red traffic light, or a traffic officer gesticulating with an extended arm all convey the same meaning: drivers must stop before proceeding. In other words, these symbolic expressions govern social action. For this symbol-based interaction to happen, the parties must have cognitive competences that allow one actor to produce and share signs that can be interpreted by other actors.

The semiotic and highly interactive properties of computer technology, which expedite the exchange of symbols in the communication process, are blurring the lines between the sign maker and the audience. The symbolic construction of meaning is always rooted in a particular context, which is now predominantly framed by messages created and distributed in digital networks (Castells, 2009). As Kress (2003) contends, "The affordance of the new technologies of representation and communication enable those who have access to them to be 'authors' of a new kind – that is, to produce texts, to alter texts and to 'write back'" (p. 173). Therefore, understanding the context in which computer technology is introduced as part of any ICT4D initiative invariably entails recognizing how this particular "context is inextricably interlinked with issues of power and who gets to speak for whom" (Hayes & Westrup, 2012, p. 27).

Power

The production and diffusion of meaning that governs social actions are subject to power. Power sets the tone of discursive practices and their symbolic representations that encourage or discourage certain actions. The mechanisms of power "determine the conduct of individuals and submit them to certain ends or domination, an objectivizing of the subject" (Foucault, 1994e, p. 225). Relations of power do not always need coercion; they can manifest not in spite of freedom but through freedom, as Foucault (1994a) persuasively argues:

> "The way the conduct of others is controlled takes very different forms and arouses desires and appetites that vary greatly in intensity and depending on the society… Societies in which the control of the conduct of others is so well regulated in advance that, in a sense, the game is already over… However, the freer people are with respect to each other, the more they want to control each other's conduct. The more open the game the more appealing and fascinating it becomes". (p. 300)

Information exchange follows a predominantly unidirectional flow from a more knowledgeable, experienced, or powerful source to a less knowledgeable, unexperienced, or vulnerable recipient. This asymmetry in the flow of information engenders the accumulation of symbolic capital: "the acquisition of a reputation for competence and an image of respectability and honourability that are easily converted into political positions as a local or national *notable*" (Bourdieu, 1984, p. 291; emphasis in the original). Consequently, the messages produced by influential individuals are regarded as more valuable at the expense of those produced by those in a weaker position in the social hierarchy (Bourdieu, 1993).

In today's world, the ubiquity of computer technology allows certain actors to exploit its interactive properties and engage in communication endeavors to influence the construction of meaning around specific domains of human activities (Castells, 2009). Consequently, power imbalance emerges in a situation where only a few have the capacity to produce messages for public dissemination. ICT4D initiatives are not immune to this power imbalance; sometimes they may even inadvertently reinforce it (Kleine & Unwin, 2009). Thus, empowering the disenfranchised through ICT4D initiatives requires adopting a participatory approach (Melkote & Steeves, 2001) and considering local understandings of social order and development (Avgerou, 2010).

In this photo-essay, I argue that the construction of meaning and the exercise of power constitute an inextricable dyad. As Foucault (1994d) argues, "Power relations are exercised, to an exceedingly important extent, through the production and exchange of signs; and they are scarcely separable from goal-directed activities that permit the exercise of a power" (p. 338). Using photographs, I explain how these two elements intertwine and mutually reinforce each other in the communication process.

METHOD

The fieldwork of this study was conducted between July and November 2005 in an area spanning roughly 2,000 square kilometers in the northern Peruvian Andes. It encompassed eight communities in the Cajamarca region: Chanta Alta, Chilete, Combayo, Huanico, La Encañada, Llacanora, Puruay Alto, and San Marcos. These communities were chosen because their inhabitants got access to computer technology for the first time in 2003 in virtue of the Rural-Urban Information System Project[1], which entailed the opening of telecentres – locally called 'infocentros'. Data were collected through 36 in-depth, one-to-one, face-to-face interviews with infocentro users and managers as well as the project sponsors. In addition, I produced over 200 pages of hand written field notes that captured my observations and interpretations of computer-mediated communication practices and everyday life. These data were collected concurrently with the 165 photographs I took – using an affordable, non-professional digital camera – during my time in the field.

Table 1 presents selected facts about the aforementioned communities. Besides population, access to electricity as well as potable water and public sewage make a noticeable the contrast between La Encañada, Chilete, and San Marcos and the other communities. The former have some traits of small urban settlements while the latter are unmistakably rural. In addition, the travel times from Cajamarca City, the main town in the region, reveal the communities' remoteness, even though they are not far away from the city; Huanico is a case in point. At the time of the fieldwork, many households in Chilete and San Marcos owned computers; internet

---

[1] The SIRU (by its Spanish acronym) Project, sponsored by a consortium of non-governmental organizations, built upon the previously developed platforms of a rural library system, satellite telephony infrastructure, and an AM broadcasting station for the Cajamarca region.

cafés were available too. Computer technology in the other six communities was available at the local infocentro only.

Table 1. Selected facts about the research sites						
Communities	Population	Electricity	Potable water / public sewage	Distance and travel time from Cajamarca City	Number of computers at the infocentro	Satellite public phone at the infocentro
Puruay Alto	500	No	No	16 km / 2.0 h	1	1
Huanico	300	No	No	78 km / 14.0 h	1	1
Chanta Alta	539	No	No	68 km / 2.5 h	1	1
Combayo	300	No	Yes	30 km / 1.5 h	stolen	1
Llacanora	520	Yes	Yes	25 km / 1.0 h	1	1
La Encañada	1,200	Yes	Yes	34 km / 1.0 h	3	1
Chilete	2,600	Yes	Yes	50 km / 2.0 h	1	1
San Marcos	8,000	Yes	Yes	65 km / 1.0 h	broken down	1

Sources: INEI (2006) and local authorities

Puruay Alto was the most bucolic of the eight communities. Around its main square, there was one household only; the other dwellings were scattered in a wide mountainous area. The travel time from Cajamarca City was around an hour through a non-paved, narrow trail on public transportation and then another hour walk. The hamlet had neither electricity nor public sewage; there was one tap only at the main square. The only computer and satellite public telephone available, both solar-powered, were available at the hamlet's infocentro.

Huanico was by far the most isolated village. Electricity, public sewage, landline, and mobile phones were not available at all. Drinkable water was not available either due to the dry season. At the infocentro, there was one computer and a satellite public telephone operated by solar power. Many of the houses in the town were locked with padlocks from outside; their owners spent most of their time in the neighboring areas dedicated to farming activities. They came only on Fridays for the weekly open-air markets to sell and barter their produce.

Chanta Alta lacked phone service, both landline and mobile. The only satellite telephone and computer were available at the infocentro – both operated by solar panels. Drinking water was provided with major restrictions and public sewage was made available in February 2005 with funding from Yanacocha[2]. Situated at 68 kilometers north of Cajamarca City, getting there took

---

[2] Yanacocha, the largest gold mine in South America, peaked its production in 2005, the year the fieldwork was conducted.

me two and a half hours by public transportation, through a road whose 30 first kilometers only were paved.

Combayo is at 30 kilometers northeast from Cajamarca City. At the time of the fieldwork, its infocentro had been broken in twice and the computer not replaced, so the only communication technology available for its 300 inhabitants was the solar-powered satellite public telephone.

Llacanora had potable water, public sewage, electric power, and one public telephone only – the other one was available at the infocentro, along with a computer. Given its proximity to Cajamarca City, just 25 kilometers away, local people commuted on a daily basis for study or work. Although its historical and natural sites attracted many domestic and international visitors, Llacanora lacked local accommodation.

La Encañada is an interesting case because of the unusual circumstances that created resentment among its inhabitants. This district had been favored by receiving an unanticipated revenue from royalties because Yanacocha was within its jurisdiction. The abrupt increase in resources did not translate into better living conditions for its population, who were largely struggling in a subsistence economy. A magnificent yet unfinished bullfighting arena, a not well-maintained sport coliseum, a superb football field inside a property under legal dispute, and a brand-new, fully equipped yet oversized hospital according to the resident doctor are just examples of the developments underway that made locals and nonlocals condemn La Encañada authorities. In terms of infrastructure, La Encañada town had electricity as well as public water and sewage. Landlines were not available; there was no access to the Internet either. Its infocentro, which was equipped with three computers and a public telephone, occupied a four-story building owned by the local council.

Chilete enjoys the services available in any other large city – e.g., electricity, drinkable water, cable TV, both landline and mobile phones, and so on. A paved road connecting Cajamarca City and the Pan-American Highway along the Peruvian shoreline through Chilete makes this town a major commercial and transportation hub in the region. Traders from both the interior and the coastal areas gather in Chilete, turning its ways into a bustling center of commercial activities. Furthermore, it is the only community out of the eight on which this research was conducted that newspapers of the day could be obtained. Many households owned computers; in addition, locals

could access the internet through internet cafés, in addition to the one computer available at the local infocentro.

San Marcos, with a population of 8,000 inhabitants, was the most urbane settlement among the eight communities. It was served by every-hour public transportation to and from Cajamarca City, which took one hour over a paved road. Drinkable water, public sewage, electric power, landline phones, mobile phones, public phones, cable TV, and internet access were available. Local people did not need to visit its infocentro for accessing computers – in fact, its only computer was broken at the time of the fieldwork.

Photo essay

The 24 photographs included in this photo-essay are the ones that have the power of endorsing my interpretation of the phenomenon under study and contributed to showing the chain of evidence. Selecting these images among 165 entailed a thoughtful process whereby I had to reflect on what elements of participants' world was captured and how I wanted to represent it. As Bloustein (2003) reasons, "the camera… lends itself to being a tool both for *understanding* others and being reflexive about oneself" (p. 3; emphasis in the original).

I followed a combined approach for capturing images in the field. The first few photographs were opportunistically taken, largely informed by my intuition of what could give me useful material to be analyzed later on (Pauwels, 2010). Devising a detailed photographic plan – cf. Suchar's (2006) "shooting script" – before going into the field was not a workable option. Instead, a flexible photographic strategy was conceived based on my evolving understanding of the problem that allowed me to adapt it according to my discernment of salient instances of data to be found in the field. Then, as I progressed in the data collection and analysis, I refined the selection of instances to be photographically recorded following a disgressive search (Sorenson & Jablonko, 1995). The photographs' analytical value only became evident at the time of the fully fleshed scrutiny.

I considered the photographs taken in the field as a source of data in their own right: images as "epistemic objects" (Ewestein & Whyte, 2009). The intrinsic value of the images both prompted my recollection of the details found in the field and allowed me to literally see what the situation I was trying to understand was. Observing the photographs that I had produced triggered a flow of ideas that contributed to my interpretation of the events. In the analysis of the photographs, I

interpreted both their content and the socio-cultural context in which they were produced (Banks, 2001; Rose, 2012). For those elements of social life that could not be captured in an image, I added textual information to make those elements of reality not visually accessible understandable (Ruby, 2006; Wagner, 2006). In any case, I avoided "obscuring the scene and the actors" (Bell, 2012, p. 148) with my writing.

Given the particular context of this study, I am aware that by making part of the field data visible to the audience may reinforce cultural stereotypes (Messaris & Abraham, 2001; Parry, 2010). However, it is equally true that the photographs I show here offer me the opportunity to communicate idiosyncratic traits that I could hardly do with words and numbers (Tardy, 2005). Furthermore, by presenting my findings as a photo-essay, I am not only breaking out from the constraints of the word (Galman, 2009; Rabikowska, 2010) but also aiming at provoking a sensory reaction on the reader/viewer to appreciate the context of the research. In capturing the images, I took special care to minimize obtrusiveness that may have altered the otherwise spontaneous behavior of the participants (Pauwels, 2010). Whenever it was possible, I favored photographs taken from long distances, photographs of activities involving large groups of people, or photographs of objects.

The photo-essay presented in the following section has been organized around two thematic areas. The first one provides an analytical description of the research context focused on aspects of communal life and livelihood. This analytical description prepares the way for a conceptual discussion on meaning and power in the communication process, which elaborates on two conceptual elements: communicating meaning and exercising power.

RESEARCH CONTEXT

The formation of what is known as modern Peru started in the Cajamarca region, following the violent encounter of the Spanish conquistadores with the Inca civilization. Today, Cajamarca is the fourth most populated region in Peru with almost 1.6 million inhabitants, two thirds of them living in the countryside. Although the region is one of the largest producers of dairy products and its territory has large deposits of gold, 53% of its inhabitants are considered poor, making it is the poorest region in the country (INEI, 2012). Figure 1, portraying a family lunch in Puruay Alto, serves to illustrate the living conditions of typical peasants in the Cajamarca region.

Figure 1. Modest family lunch in Puruay Alto

In general, a high sense of communitarian spirit characterizes social life, especially in the smaller communities. The mutually supportive attitude is visible through the practice of voluntary, unpaid and collective participation in communal works (e.g., building and maintaining roads, schools, irrigation channels) and helping with one another's chores (e.g., lending a hand during harvest time or in building their houses).

Farming and raising livestock are the main activities for local families. These practices have a material referent that reflect the amalgamation of indigenous practices with the ones the Spaniards brought in from Europe. Figure 2 shows two photographs. The one on the left shows vicuñas and alpacas, native South American camelids, grazing in the Andean pastures. The photograph on the right shows cows and sheep, introduced species, grazing in the same pastures. The colonizers strived to reproduce in their conquered territories the activities they were familiar with in Europe. Thus, they introduced alien flora and fauna without which they could not imagine a tolerable livelihood.

Figure 2. Vicuñas and alpacas (left) as well as cows and sheep (right) are integral part of scenery

Today, both indigenous and introduced species co-habit and sustain economic activities in the region. The weekly open-air markets give evidence of how entrenched trading practices are in the community. The photograph on the left in Figure 3 shows peasants arriving in La Encañada for the Sunday's open air-market. Groups of 20 or so people transported by truck brought their produce and livestock from the surrounding areas to the marketplace. The day the photograph on the right shown in Figure 3 was taken, I observed more than 30 trucks queuing at the San Marcos' fair, while traders negotiated cattle price with local farmers. Around 90% of the trucks covered the 900 kilometers that separate Lima from San Marcos. According to the local Ministry of Agriculture office, the value of transactions could go as high as US$ 150,000 on a market day.

Figure 3. Gathering for the weekly market in La Encañada (left) and San Marcos (right)

Certainly, cattle were not the only transacted stock. The weekly markets provided evidence of the blending of indigenous cultural expressions with occidental customs. After three centuries of European domination and almost two hundred years of western influence, many of the transacted

goods symbolized this amalgamation. The photograph on the left in Figure 4 shows a Chanta Alta woman weaving a blanket in a traditional fashion; the way she dressed also gives a clue of her cultural background. Weaving blankets was not only to fulfil her family's needs for shelter. The surplus of her handcrafted blankets went to the market for trading. The photograph on the right in Figure 4 shows a young man holding a tray of dough rolls ready to be baked in the traditional firewood, heat-resistant brick oven at the only bakery in Chanta Alta. Besides satisfying the local demand, extra batches were prepared to be sold at the weekly market.

Figure 4. Traditional weaving (left) and rudimentary oven (right) in Chanta Alta

The Chanta Alta's weekly open-air market provided the platform where individuals gather to sell-and-buy or barter their products; not only blankets and bread rolls but also vegetables, livestock, and dairy products, among others. Every Saturday, the usually quiet and empty main square turned into an arena for bustling trade (Figure 5). Not for less visible, the communication process that occurred at the open air-markets – not only in Chanta Alta – could be ignored. Prospective deals were discussed, future meetings were coordinated, and messages were passed on, all the while the infocentro's loudspeakers beamed music, announced incoming phone calls, and broadcast produce market price. In the marketplace, certain actors became temporarily more salient than others, because whether they were the information providers, sold the most sought-after goods or had control of the technology that allowed them to broadcast information others had produced.

Figure 5. Bustling open-air market in Chanta Alta

In this sense, the commercial activities taking place in the market constituted the agglutinant that made possible the coordination of actors with dissimilar interests. Darío[3], a well-known wicker worker and one of the founders of an organization that sought to promote businesses in the region, firmly believed in the value of being connected for organizing communal efforts. He stated, "It is very important to belong to a network… by talking to other people, we could know better what their thoughts are and how we can organize the community." He traveled throughout the country to sell his handcraft; he had even taken his artwork to neighboring Ecuador. He expressed his faith on the potential of computer technology not only for disseminating information but also for expanding the geographical range of his commercial endeavors beyond the immediate vicinity. With the help of United States Peace Corps volunteers, he developed a digital catalogue of his art – some of which is shown in Figure 6.

---

[3] Darío is a pseudonym.

Figure 6. Darío proudly displaying his wickerwork

Billboards also provided the material support for inscribing a mix of textual and graphical information in order to promote trading activities. The handwritten billboard shown in Figure 7 is revealing in two accounts: literacy level and power imbalance in the region. Misspellings, inconsistent use of capital letters, missing words, and even an inverted letter (i.e., h in "Sanchez") are evident. In correct Spanish spelling, the message should read "Requintos Sánchez [the drawing of a guitar] ofrece servicios de reparación de toda clase instrumentos y fabricaciones," which means, "Sanchez tuning [the drawing of a guitar] offers repair services for all types of instruments and brands." Furthermore, this artless advertisement reveals the contrasting situations among the message producers. Unlike the banners and posters produced by those in influential positions (cf. Figure 11), ordinary people resorted to whatever resources they had available to convey meaning; in this case, to announce their services and generate an income. The location of this advertisement, on a minor street, is another indication of the social condition of its producers.

Figure 7. Advertisement of musical instrument repair in La Encañada

Similarly, the unpolished poster affixed to an outdoor, clay-brick wall in Llacanora provides another example of how the underprivileged produced advertisements in their struggle for sustenance (Figure 8). It announced the screening of the movie Rambo at one of the locals' house. The transliteration into English of this sloppy text reads, "Video Movie Max: PRESENTS The biggest blockbuster Movie of the latest times 7:00 PM RAMBO (tickets) 0.50 2 Enero 260 0.50". The uneven spatial distribution of the text and the irregularities of the font are conspicuous. Moreover, the ticket price was negligible for Latin American standards; just about US$ 0.15. Nevertheless, owning a TV set and a video player represented an income-generating asset rather than a household entertainment equipment for people in the region.

Figure 8. Billboard advertising the screening of the movie Rambo

MEANING AND POWER IN THE COMMUNICATION PROCESS

I proceed now to analyze how meaning and power operate in an inextricably fashion shaping the communication process in these communities.

Communicating meaning

The first people in the Cajamarca valley left evidence of their social activities in the Qayaqpuma[4] Mountain, at 30-minute walking distance from Llacanora. They represented hunting activities on rock (Figure 9) approximately 10,000 years ago (Mires Ortiz, 2001). Archaeological studies suggest that these paintings were related to shamanic rituals. The shamans, endowed with supernatural powers, served as a liaison between the commoners and the spirits believed to influence the forces of nature. In this sense, the shamans asserted their power as the only valid interlocutors to the deities to signify hunting endeavors, the chief social activity back then.

Figure 9. 10,000-year-old rock art in Qayaqpuma Mountain depicting hunting activities

The hundreds of 3,500 years old tombs of the Combayo Necropolis, at 1.5 kilometers southeast from Combayo, represent another expression of communicative practices with the spiritual world. The arrangement in rows of contiguous quadrangular niches, some of them forming internal galleries dug into the hill where they lay, is proof of an elaborated design (Figure 10). In paying tribute to those who had passed away, people of the Cajamarca culture chose the location carefully; their elevated location makes the tombs easily recognizable from afar. The commemorative tombs indicate ancestor worship and represent an unequivocal recognition of the socially internalized belief in afterlife and the struggle of overcoming corporeal limits.

---

[4] Qayaqpuma is a Quechua vocable made of two words, *qayaq* and *puma*, meaning 'cougar den'.

Figure 10. Symbolic expression of afterlife in Combayo Necropolis

The Spanish conquest of the Inca Empire in the XVI century brought new expressions of sacred symbolism. For instance, the five churches located within just one square kilometer in the historic center of Cajamarca City, constituted conspicuous symbols intended to propagate the Catholic faith in the conquered territories. However, symbolic expressions transcend metaphysical domains and communicative devices have also been contrived to advance earthly interests and influence other people in recent times. For instance, the local council put up a colorful banner to announce the construction of a hotel in La Encañada: "On this site, a new ten-story building will be erected – Municipal Hotel" (Figure 11). To the right, under the main banner, there is smaller billboard with the heading "La Encañada District Council," followed by the mayor's name. Whether this work will see the light of the day or not is beyond the scope of this discussion – it has not yet. What is relevant to this analysis is the use of symbols to produce meaning, while subtly reminding local people who is in control.

Figure 11. Banner announcing the construction of a 10-storey hotel in La Encañada

Pin-boards and white boards were other means used to carry messages to the community. Figure 12 shows a man reading information about the government-led land ownership program affixed to a pin-board put up in front of the San Marcos infocentro. The printout contains the names of those whose property rights over land would be formalized along with the date and place for the granting of the property deeds. Next to the printout, on the same pin-board, a poster with the map of Peru exhibits the produce that different regions of the country export. The whiteboard leaning against the wall displays produce market price information. The use of surfaces on public spaces for conveying meaning reflects the belief of information producers that their messages would be read and eventually disseminated via word of mouth.

Figure 12. Communicating information through pin-boards and whiteboards in San Marcos

Another visible element on the photograph shown in Figure 12 is the mural depicting a rural scene under a prominent "Infocentro San Marcos" banner. In fact, the introduction of telecommunication technology in the Cajamarca region represented a major milestone and hosting an infocentro symbolized progress for the community and a reason for pride to locals. Emblazoning the infocentro facilities served as a reminder that the community had now access to telephone service and computer technology. For instance, the mural at the Chanta Alta infocentro portrays life in the countryside – e.g., depictions of a woman weaving, a herder tending cattle interspersed with the river, the forest, and the mountains (Figure 13). The green-background billboard hanging from the balcony proclaims, "Infocentro – Chanta Alta – Satellite-enabled Internet communication" followed by the infocentro manager name and email. The combination of these two elements are evocative of a harmonious marriage of pastoral traditions and with the recently introduced technology.

Figure 13. Chanta Alta infocentro façade

The infocentros were not just any other building. They were centrally located and their opening was marked by communal celebrations. The infocentro exteriors turned into the canvasses for expressing the community jubilance of being connected to the world. For instance, the colorful mural of the Puruay Alto infocentro's façade represents the highly symbolic meaning local people attributed to it: a computer and its accessories along a telephone in rural background (Figure 14). As one villager exultantly commented, "We have got the latest technology… Very advanced, indeed!"

Figure 14. Colorfully decorated Puruay Alto infocentro

Inside the Puruay Alto infocentro, I found another revealing clue of the communication process. Figure 15 shows the price list of the services offered at the infocentro. The list is plagued with misspellings – i.e., "servisios", "telefono" and "targeta" – that have been subsequently corrected – i.e., "servicios" (services), "teléfono" (telephone), and "tarjeta" (phone-card). Someone, presumably a schoolteacher (the school is next to the infocentro and students visit it frequently for completing their assignments), did care and bothered to correct the misspellings. The photograph also suggests the paucity of resources of the infocentro; instead of producing a new poster, the misspellings were corrected by overwriting the correct text in a different color. The poster may look unprofessional for an urban person, but its producer made an effort to present an engaging placard. At the bottom, below the price list, an emblazoned text conveys a sense of aspiration: "All this and much more can be found at the Puruay infocentro." To the right, a prominent, colorful banner announces that Internet access is available.

Figure 15. Services available at the Puruay Alto infocentro

Meaning was not restricted to visual elements only. The introduction of the infocentros also brought the establishment of local radio stations. Figure 16 shows the broadcasting of the weekly *Trail Walking* radio program at the makeshift Chanta Alta radio station. The program host, who also is in charge of the infocentro, said, "We use the radio as an important means to share the information we have available." The broadcast information, largely obtained from the internet, was usually about farming-related activities. Miscellaneous posters (i.e., folklore groups, call for an essay-writing contest, call for communal participation, a map and a calendar) covered the walls of the radio station.

Figure 16. Chanta Alta infocentro manager broadcasting from the local radio station

Radio broadcasting, while being an essentially oral practice, largely depends on writing technology for the circulation of meaning. As it can be observed in Figure 16, the radio host is airing the content he is reading from a text. Similar to the Chanta Alta infocentro manager, the person in charge of the San Marcos infocentro also hosted a radio program that mainly broadcast farming information from the *Chasquillacta* radio station located on the town's main square (Figure 17).

Figure 17. *Chasquillacta* **radio station on San Marcos main square**

Listening to the radio was a widespread practice. Besides farming techniques and produce market prices, local radio broadcasts were a very popular means of transmitting miscellaneous information, including communal meeting announcements, personal greetings, and party invitations, among others. During my time in the field, I observed many locals listening to the radio while doing their habitual activities (e.g., working on the land, building houses, baking bread, riding horses), an instantiation of the predominance of aural cues in the communication process. The circles shown in Figure 18 call attention to the radios Huanico villagers carried while watching a casual soccer game. The radio listeners constituted an absent and inaudible audience that made sense of the message the radio hosts broadcast in a one-to-many fashion.

Figure 18. Radios (circled) carried by Huanico people while watching a casual soccer game

Unlike unidirectional radio broadcasting, the interactive properties of computer technology allow the mutual construal of meaning. I observed that locals used chat and email services to exchange information on a wide range of topics (e.g., lifestyle, weather, job opportunities) and sometimes compare their immediate circumstances to their communication partners' – some of them located in other countries.

Figure 19 shows three teenagers on the right (the fourth person on the left is the infocentro manager) on chat sessions using the computers at La Encañada infocentro. These boys were engaged in one-to-one conversations with acquaintances they met online. This communication exchange was possible only because the existence of a common system of meaning – i.e., the ability to compose messages and write back in a language that was understandable to the parties.

Figure 19. Teenagers chatting at La Encañada infocentro

Some individuals were eager to be engaged in a communication exchange for the benefit of the community. As I was drawing to a close my data collection in Chanta Alta, one farmer who actively promoted improvements on stockbreeding techniques in the area requested my email address and bade farewell to me with a special request: "You can put me through with a specialist on the veterinarian field for sharing ideas. We have a lot to learn from them, as they have a lot to learn from us too." The tone of his expression reveals his confidence of being able to communicate in equal terms with experts on the field. Furthermore, the noun "we" reveals his communitarian perspective.

Exercising power

Power has been exercised in different ways since ancient times. The Chavín culture (900–50 BC) erected what would become the major religious center in the Cajamarca region, Kuntur Wasi (Figure 20). The strategic location of Kuntur Wasi made it more than a just a ceremonial center;

it was also a passage point between the coastal region and the highlands, which Chilete town – just 26 kilometers from Kuntur Wasi – has inherited.

Figure 20. Kuntur Wasi ceremonial center

On the 15th of November 1532, the hidden Spanish infantry and cavalry led by Francisco Pizarro charged the unsuspecting Inca entourage and captured Atahualpa, the Inca Emperor, soon after he entered a deceptively empty Cajamarca plaza. Francisco de Xerez, secretary to Pizarro, chronicled the event: "The Governor [Pizarro] went to his lodging, with his prisoner Atabaliba [Atahualpa], despoiled of his robes, which the Spaniards had torn off in pulling him out of the litter. It was a very wonderful thing to see so great a lord taken prisoner in so short a time, who came in such power" (Markham, 1872, p. 56). Atahualpa was sentenced to death and executed in July 1533, even he had offered Pizarro to buy his liberty by filling the room where he was kept prisoner with gold and the two following rooms with silver, up to the level of the reach of his arm. The imprisonment and following execution of Atahualpa marked the end of the Inca Empire. The old Castilian Spanish text engraved on a marble plaque (Figure 21) at the entrance

of what became known as the 'ransom room' immortalizes the domination of the victorious conquistadores over the defeated Incas. Francisco de Xerez used written words, a technology that was unknown to the indigenous population, to construe the epic moment he reveled in and document the humiliation of the Inca Emperor. Pizarro, who was not able to read and write, needed a literate person for keeping a record of his adventure. While Pizarro held the military command of the expedition, de Xerez mastered the technology of writing.

Figure 21. Plaque commemorating the capture of Atahualpa

Since then, indigenous people worked in a serfdom regime on the large extensions of land that Spaniards took over after the conquest. The independence revolution in the 1820s did not bring about improvement in their living conditions; they continued in a state of absolute subjugation to their landlords until the agrarian reform in 1969. This initiative contributed little to improve their wellbeing. The largely illiterate indigenous population suddenly became land owners of properties that barely stretched one hectare on which they practiced subsistence agriculture with no access to credit instruments and technical assistance. The neoliberal reforms introduced in the 1990s only served to accentuate their deprivation.

The exercise of power through the use of symbols to influence individuals' opinions and actions has not changed. The political struggles in La Encañada illustrate this observation. Ubiquitous billboards with the mayor's name and an extremely pompous saying "Great men, such as [the mayor's name], are forever recognized by their deeds" created tensions among his supporters and opponents. Yet the mayor was not alone in his posturing. At the public ceremony that took place on Sunday the 18th of September 2005, I witnessed an instantiation of cult of personality by one of his fiercest political adversaries, Don Víctor[5], the district prefect. There were folklore bands, school performances, and speeches to celebrate the prefect's birthday. Don Víctor was impeccably dressed in a blue suit, with a red and white (the Peruvian national colors) sash and a pin on his lapel with the Peruvian and US flags crossed. Prefects from the villages within La Encañada jurisdiction – who were subordinates to Don Víctor – marched in wearing military-uniform-style T-shirts with the legend "Víctor is everybody's friend" (Figure 22). The "Don" title was not printed on the T-shirts; probably, in attempt to demonstrate affection to and intimacy with local people. Don Víctor (not visible) was on the stage among the 'notables', while the subordinated prefects paraded in three columns, the ones in the outer columns wearing black T-shirts, the ones in the middle wearing white T-shirts. Suffice to say that the Catholic priest sent a severe message during his homily on that Sunday's mass: "Jesus is not looking for your votes like many others in La Encañada."

---

[5] Don is an honorific title that denotes the social standing of a person; Víctor is a pseudonym. Local people referred to him as Don Víctor.

Figure 22. Prefects marching in paying homage to La Encañada prefect

Political authority was not the only means of power exercise. Transportation technology established alternative power dynamics. Figure 23 depicts the truck that I rode on my way to Huanico at one of its stops for collecting milk containers to be shipped to a dairy plant in Cajamarca City. During the journey, I observed that the truck driver operated as a messenger as well. "Please, tell my godfather that I am going to visit him next Wednesday"; "Take this rucksack of potatoes to my friend", were typical of the messages I heard. The truck driver delivered: messages were passed on and packages were dispatched. The recipients usually corresponded by giving the truck driver produce or homemade cheese; no monetary transactions were observed. Not only the truck driver was part of an extensive network but also was in control of a technology – i.e., the truck – that put him in a privileged position in the communication process over a vast area, gaining recognition and material benefits.

Figure 23. Milk collection truck stopover

With the introduction of computer technology, power was redistributed. Individuals who had the ability to encode and decode information in a way that could be processed using computer technology gained power in their communities. They often organized computer workshops or provided one-on-one computer training to their peers as shown in Figure 24, which depicts a young man teaching a girl how to use a text-processor. The physical arrangement shows who is in control: he sat in front of the screen and had control of the keyboard, while she stared at screen.

Figure 24. Training on text-processor use

Furthermore, some of the computer-skilled individuals I interacted with during my fieldwork went beyond training others on the use of computer technology. They used computers to seek information and triggered a communication process relying on their relatively extended network of contacts. Although not highly educated, they were able to search, analyze, evaluate, and apply the information they obtained from web repositories and online contacts. More importantly, they were willing to communicate the information they got from computers and were active in mobilizing resources to disseminate it. Their country fellows admired their ability to communicate fresh and valuable computer-mediated.

DISCUSSION

This photo-essay was informed by two fundamental assumptions. The first one is that meaning and power always work together in shaping social action. The second one is that, in a reciprocal manner, meaning and power are manifestations of how social groups operate. The analysis has corroborated both assumptions. The photographic evidence shows that communal life and

livelihood have remained virtually unchanged for centuries in the Cajamarca region. Generally, local people get by with subsistence farming in predominantly close-knit communities. Furthermore, the analysis conducted on the photographs explains how the communication of meaning and exercise of power work in tandem and mutually shape one another. The simultaneous presence of different means for information exchange (i.e., oral, written, and digital) traversing cohesive communities nested in somewhat hierarchical structures has produced two concomitant levels of asymmetric communication: vertical and horizontal (Figure 34). The emerging dyads of meaning and power of ordinary people coexist with and are somewhat subordinated to the traditional dyads of meaning and power of those in dominant positions.
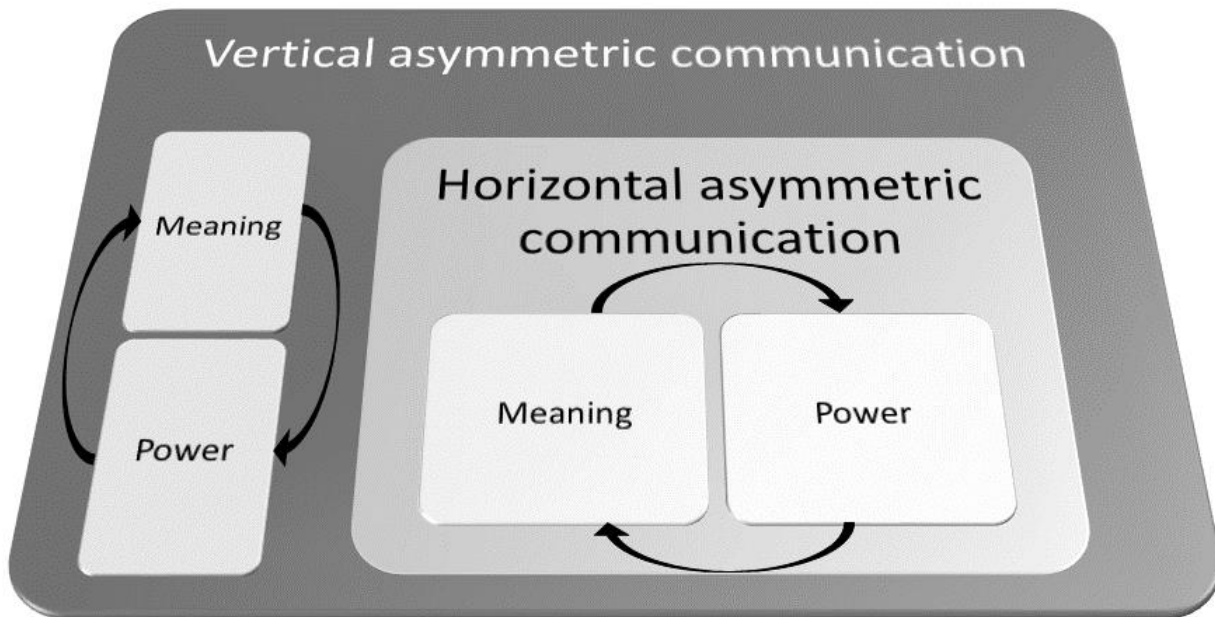

Figure 25. Two-level asymmetric communication: vertical and horizontal

Vertical asymmetric communication occurs between those in dominant positions and the rest of the community. The production of meaning was reserved for the former. Since the early ages, those believed to have a mystical connection with supernatural forces represented aspects of social life (e.g., rock paintings), devised how the dead would be honored (e.g., burial sites) or regulated spiritual rituals (e.g., ceremonial centers). The introduction of the alphabet in the XVI

century served not only to document the fall of the indigenous culture but also to sanction social order during colonial times. Contemporary political elites also used written language to advance their political agendas, all the while trying to seduce common people. In summary, influential individuals controlled the production of meaning to a great deal.

Whether scripts were used to document the conquistadors' military achievements on chronicles, to publicize local authorities' vision of development on prominent banners or to brag about influential individuals' charisma on stamped T-shirts, the written information they conveyed ultimately flowed verbally. These instances suggest that the use of written communication was broadly reserved for the elite groups. Besides education, they had the economic resources, social status, and political authority to produce and disseminate messages that served their interests. For the rest, written communication could only be of limited scope and extent (rudimentary ads on a minor street do not have the same effect as a colorful banner on a prominent location).

The introduction of computer technology in the early 2000s expanded the sources of information that ordinary folks could draw upon. Computers exposed local people to online content produced by media and business organizations as well individuals. They had access now to sources of information other than the ones elaborated by the elite groups for fulfilling their information needs, somewhat eroding the control those in predominant positions enjoyed in the communication process. Local people got access to virtually unlimited sources of information that could enhance their business and life prospects – e.g., market prices – and also increase their understanding of their relative position in the social system through information exchange with online acquaintances, including those living overseas. Furthermore, they gained the opportunity to be producers of information that could be directly exchanged without intermediaries in one-to-one or one-to-many communications, connecting local and supra-local circles – e.g., setting up a website to advertise handcraft in foreign markets.

However, only few individuals became consumers of computer-mediated information and active producers of meaning. Only those who were able to interpret and produce computer-mediated information emerged as new key players in the communication process engendering a *horizontal asymmetric communication*. Unlike the traditional power holders within the communal social system, these individuals did not hold any political authority, economic influence or social pedigree. They gained respect and prestige because of their ability to understand and produce

digital information as well as their deep involvement with communal activities. Their eagerness to use computer technology for exchanging information that could be beneficial to the community made them prominent. The standing these individuals gained steadily created asymmetries in the information exchange within their communities. They became their fellow citizens' representatives. By becoming the new masters of meaning, they were replicating, maybe unwittingly, the structures of power at a different level.

CONCLUSION

This photo-essay contributes to our understanding of the dynamic mechanisms that govern information exchange in the context of rural communities. The findings suggest that computer technology has introduced changes in the consumption and production of meaning, which in turn modify how power is exercised. The analysis explains the coexistence of vertical and horizontal asymmetries in the communication process. Furthermore, it demonstrates that while computer technology has contributed to the democratization of information consumption and production, traditionally under the control of those in a dominant position, it has simultaneously created new, emergent structures of power within ordinary people in rural communities. These emergent structures of power constitute the unintended consequences of technological intervention alluded by Kleine & Unwin (2009).

By resorting to the verbal-visual intertextuality of photo-essay, I have invited the reader/viewer to inspect the photographs directly in relation to the accompanying text in my analysis. In addition, by sharing the photographic material of a particular, perhaps unfamiliar, context in a vivid way, I have attempted to provoke a sensory response on the viewer/reader. In this sense, this study also offers a methodological contribution by showing how the photo-essay genre can be implemented in ICT4D research, as Gomez & Vannini (2015) and Nemer (2013) have done before.

REFERENCES

Avgerou, C. (2010). Discourses on ICT and development. *Information Technologies & International Development, 6*(3), 1-18.

Banks, M. (2001). *Visual methods in social research*. London, UK: Sage Publications.

Bell, V. (2012). Photo-image. In C. Lury & N. Wakeford (Eds.), *Inventive methods: The happening of the social* (pp. 147-162). Hoboken, NJ, USA: Taylor and Francis.

Bloustien, G. (2003). Introduction: Envisioning ethnography - Exploring the meanings of the visual in research. *Social Analysis, 47*(3), 1-7.

Bourdieu, P. (1984). *Distinction: A social critique of the judgement of taste* (R. Nice, Trans.). Cambridge, MA, USA: Harvard University Press.

Bourdieu, P. (1993). *The field of cultural production: Essays on art and literature*. New York, NY, USA: Columbia University Press.

Brown, J. S., & Duguid, P. (2002). *The social life of information*. Boston, MA, USA: Harvard Business School Press.

Brynjolfsson, E., & McAfee, A. (2014). *The second machine age: Work, progress, and prosperity in a time of brilliant technologies*. New York, NY, USA: Norton.

Castells, M. (2009). *Communication power*. New York, NY, USA: Oxford University Press.

Chatman, E. A. (1996). The impoverished life-world of outsiders. *Journal of the American Society for Information Science, 47*(3), 193-206.

Chatman, E. A. (1999). A theory of life in the round. *Journal of the American Society for Information Science, 50*(3), 207-219.

Dervin, B. (1977). Useful theory for librarianship: Communication, not information. *Drexel Library Quarterly, 13*(3), 16-32.

Dervin, B. (1989). Users as research inventions: How research categories perpetuate inequities. *Journal of Communication, 39*(3), 216-232.

Díaz Andrade, A., & Urquhart, C. (2009). The value of extended networks: Social capital in an ICT intervention in rural Peru. *Information Technology for Development, 15*(2), 108-132.

Díaz Andrade, A., & Urquhart, C. (2010a). The affordances of actor network theory in ICT for development research. *Information Technology & People, 23*(4), 352-374.

Díaz Andrade, A., & Urquhart, C. (2010b). The role of social connectors in seeking computer-mediated information in rural societies. *Human IT, 11*(1), 1-28.

Engeström, Y. (2015). *Learning by expanding: An activity-theoretical approach to developmental research* (2nd ed.). New York, NY, USA: Cambridge University Press.

Ewestein, B., & Whyte, J. (2009). Knowledge practices in design: The role of visual representations as 'epistemic objects'. *Organization Studies, 30*(1), 7-30.

Fisher, K. E., Landry, C. F., & Naumer, C. (2007). Social spaces, casual interactions, meaningful exchanges: "Information ground" characteristics on the college student experience. *Information Research, 12*(2), paper 291.

Foucault, M. (1994a). The ethics of the concern for self as a practice of freedom (P. Aranov & D. McGrawth, Trans.). In P. Rabinow (Ed.), *Michel Foucault - Ethics: Essential works of Foucault 1954-1984* (Vol. 1, pp. 281-301). London, UK: Penguin Books.

Foucault, M. (1994b). "Omnes et singulatim": Toward a critique of political reason (R. Hurley & others, Trans.). In J. D. Faubion (Ed.), *Michel Foucault - Power: Essential works of Foucault 1954-1984* (Vol. 3, pp. 299-325). London, UK: Penguin Books.

Foucault, M. (1994c). Self writing (P. Aranov & D. McGrawth, Trans.). In P. Rabinow (Ed.), *Michel Foucault - Ethics: Essential works of Foucault 1954-1984* (Vol. 1, pp. 207-222). London, UK: Penguin Books.

Foucault, M. (1994d). The subject and power (R. Hurley & others, Trans.). In J. D. Faubion (Ed.), *Michel Foucault - Power: Essentials works of Foucault 1954-1984* (Vol. 3, pp. 326-348). London, UK: Penguin Books.

Foucault, M. (1994e). Technologies of the self (P. Aranov & D. McGrawth, Trans.). In P. Rabinow (Ed.), *Michel Foucault - Ethics: Essential works of Foucault 1954-1984* (Vol. 1, pp. 223-251). London, UK: Penguin Books.

Galman, S. A. C. (2009). The truthful messenger: Visual methods and representation in qualitative research education. *Qualitative Research, 9*(2), 192-217.

Giddens, A. (1987). *Social theory and modern sociology*. Cambridge, UK: Polity.

Gomez, R., & Vannini, S. (2015). *Fotohistorias: Participatory photography and the experience of migration*: CreateSpace.

Hayes, N., & Westrup, C. (2012). Context and the process of ICT for development. *Information and Organization, 22*(1), 23-36.

INEI. (2006). *Perú en cifras*. Retrieved June 20, 2006, from http://www.inei.gob.pe/

INEI. (2012). *Encuesta nacional de hogares sobre condiciones de vida y pobreza*. Retrieved December 3, 2014, from http://webinei.inei.gob.pe/anda_inei/index.php/catalog/195

Kallinikos, J. (2006). *The consequences of information: Institutional implications of technological change*. Cheltenham, UK: Edward Elgar.

Kapitzke, C. (2003). (In)formation literacy: A positivist epistemology and a politics of (out)formation. *Educational Theory, 53*(1), 37-53.

King, B. J. (1994). *The information continuum: Evolution of social information transfer in mokeys, apes, and hominids*. Santa Fe, NM, USA: School of American Research Press.

Kleine, D., & Unwin, T. (2009). Technological revolution, evolution and new dependencies: What's new about ICT4D? *Third World Quarterly, 30*(5), 1045-1067.

Kress, G. (2003). *Literacy in the new media age*. Oxon, UK: Routledge.

Kress, G., & Van Leeuwen, T. (2001). *Multimodal discourse: The modes and media of contemporary communication*. London, UK: Arnold.

Lamb, R., & Kling, R. (2003). Reconceptualizing users as social actors in information systems research. *MIS Quarterly, 27*(2), 197-235.

Markham, C. R. (1872). *Reports on the discovery of Peru*. New York, NY, USA: Burt Franklin.

Melkote, S. R., & Steeves, H. L. (2001). *Communication for development in the Third World: Theory and practice for empowerment* (2nd ed.). Thousand Oaks, CA, USA: Sage.

Messaris, P., & Abraham, L. (2001). The role of images in framing news stories. In S. D. Reese, O. Gandy, & A. E. Grant (Eds.), *Framing public life: Perspectives on media and our understanding of the social world* (pp. 215-226). Mahwah, NJ, USA: Lawrence Erlbaum.

Miettinen, R. (1999). The riddle of things: Activity theory and actor-network theory as approaches to study innovations. *Mind, Culture, and Activity, 6*(3), 170-195.

Mires Ortiz, A. (2001). *Qayaqpuma - Pintura rupestre* (Vol. 1). Cajamarca, Peru: Red de bibliotecas rurales de Cajamarca.

Nemer, D. (2013). *Favela digital: The other side of technology*. Vitoria, Brazil: GSA Grafica e Editora.

Parry, K. (2010). A visual framing analysis of British press photography during the 2006 Israel-Lebanon conflict. *Media, War & Conflict, 3*(1), 67-85.

Pauwels, L. (2010). Visual sociology reframed: An analytical synthesis and discussion of visual methods in social and cultural research. *Sociological Methods & Research, 38*(4), 545-581.

Rabikowska, M. (2010). Whose streeet is it anyway? Visual ethnography and self-reflection. *Qualitative Market Research: An International Journal, 13*(1), 58-83.

Rose, G. (2012). *Visual methodologies: An introduction to researching with visual materials* (3rd ed.). London, UK: Sage.

Ruby, J. (2006). Seeing through pictures: The anthropology of photography. In P. Hamilton (Ed.), *Visual research methods* (Vol. 3, pp. 67-82). Thousand Oaks, CA, USA: Sage Publications.

Savolainen, R. (2008). *Everyday information practices. A social phenomenological perspective*. Lanham, Maryland, USA: The Scarecrow Press.

Sokolov, A. V. (2010). Information: Concept, categories, and ambivalent nature. Philosophical essays. *Scientific and Technical Information Processing, 37*(2), 102-114.

Sorenson, E. R., & Jablonko, A. (1995). Research filming of naturally occuring phenomena: Basic strategies. In P. Hockings (Ed.), *Principles of visual anthropology* (2nd ed., pp. 147-159). Berlin, Germany: Mouton de Gruyter.

Suchar, C. S. (2006). Grounding visual sociology research in shooting scripts. In P. Hamilton (Ed.), *Visual research methods* (Vol. 4, pp. 211-234). Thousand Oaks, CA, USA: Sage Publications.

Tardy, C. M. (2005). Expressions of disciplinarity and individuality in a multimodal genre. *Computers and composition, 22*(3), 319-336.

Taylor, R. S. (1991). Information use environments. In B. Dervin & M. J. Voigt (Eds.), *Progress in communication sciences* (Vol. X, pp. 217-255). Norwood, NJ, USA: Ablex Publishing.

Wagner, J. (2006). Visible materials, visualised theory and images of social research. *Visual Studies, 21*(1), 55-69.

Weber, M. (1947). The fundamental concepts of sociology (A. M. Henderson & T. Parsons, Trans.). In T. Parsons (Ed.), *Max Weber: The theory of social and economic organization* (2nd ed.). Glencoe, IL. USA: Free Press.