Phenomenology and the Social Study of Information Systems: Conversations with Kenneth Liberman

Kenneth Liberman
with
Giolo Fele, Vincenzo D'Andrea, Gian Marco Campagnolo,
Ylenia Curzi, Gianluigi Viscusi

DIPARTIMENTO DI SOCIOLOGIA E
RICERCA SOCIALE

QUADERNI

PHENOMENOLOGY AND THE SOCIAL STUDY
OF INFORMATION SYSTEMS:
CONVERSATIONS WITH KENNETH LIBERMAN

KENNETH LIBERMAN
WITH
GIOLO FELE
VINCENZO D'ANDREA
GIAN MARCO CAMPAGNOLO
YLENIA CURZI
GIANLUIGI VISCUSI

CONTENTS

5

1. FOREWORD

GIOLO FELE AND VINCENZO D'ANDREA

In February 2005 a composite group of scholars from different disciplines met in a nice Casa Rustica close to the Antica Vetreria on the Sarca river, at the entrance of Val di Genova, a small valley in the Italian Alps. It was the first of a series of events called Alpis: Alpine Ski Seminar on Information Systems. Since 2005, the purpose of that gathering of people has been to promote the social study of Information Systems in the Mediterranean region and the emergence of a European/Mediterranean identity for the scientific community on Information Systems. The Alpis ski seminar has been an "institute des hautes Ètudes" with a ludic/sport component, where high quality contributions from young researchers in the field have been presented in four subsequent days of discussion with peers, in an environment enriched by contributions of established senior researchers.

Both the format, promoting interaction and sociality, and the scientific dimension, promoting interdisciplinarity while maintaing a specific focus, have been the distinct trait of the Seminar series.

According to the invitation of Claudio Ciborra and Gianni Jacucci - the Scientific Coordinators of the Alpis Ski Seminars first edition - the research on Information Systems being presented and discussed in the Alpis community has been characterized by the reference to philosophical inquiry and to phenomenology in particular.

This publication is based on the inspirational talk the philosopher Ken Liberman gave to the Alpis Sky seminar 5th edition in 2009. Liberman teaches sociology at the University of Oregon and has been Fulbright Senior Specialist at the Faculty of Sociology, University of Trento in 2009. Liberman centers his talk around the topic of situated knowledge, a growing concern in the field of information systems. Liberman adopts a phenome-

nological perspective, with a strong ethnomethodological orientation. A student of Peter Berger and Herbert Marcuse, but especially of Harold Garfinkel [2002] and Hubert Dreyfus [1990], Liberman discusses and presents his argument starting from an examination of Section 29 of the fundamental text of Heidegger's Being and Time. Essentially, this very complex text deals with the question of the adequacy of our modes of representation of social forms and with the ways in which these forms are experienced in our daily lives. It is well known that technological solutions create patterns and structures of social organization which impose life forms completely outside of our experience with which we must come to terms, often with difficulty. As we know much of the engineering culture which is at the base of these technological solutions is not oriented towards a social or sociological perspective. Recently, however, we have seen a growing interest in the social contexts of technological innovations [for a reconstruction see Fele 2009]. This shift of attention by the specialists in business sciences, management, and information systems, has led to a deepening of social approaches into the constitutive mechanisms and the fundamental forms of social life [cfr. Dourish 2001; De Michelis 2008]. Here we see the important role, on the theoretical level, of phenomenology and ethnomethodology, and on the methodological level, of ethnography, in identifying, recognizing and describing the most profound and most subtle aspects of our social life [see Fele 2008]. Heidegger's philosophy provides the ideas for a non-trivial reflection on the foundations of situated understanding [Dreyfus 1995; Winograd 1995; Ciborra 2004].

The issue of situated knowledge covered by Liberman's essay goes far beyond the usual (although by no means obvious) importance attributed to context in the processes of communication. See the following passage from Winograd & Flores [1985]: "The computer, like any other medium, must be understood in the context of communication and the larger network of equipment and practice in which it is situated. A person who sits down at a word processor is not just creating a document, but is writing a letter or a memo or a book. There is a complex social network in which these activities make sense. It includes institutions (such as post offices and publishing

companies), equipment (including word processors and computer networks, but also all of the older technologies with which they may coexist), practices (such as buying books and reading the daily mail), and conventions (such as the legal status of written documents)"(pp. 5-6). Winograd and Flores seminal perspective recognizes the role and value of the network of relations within which social action acquires meaning. Liberman's contribution invites us to look further and deeper. From an ethnomethodological perspective [Garfinkel 2002], Liberman invites us to explore the depths of our ordinary social world, the primitive place of our experience. As an anthropologist who spent two years with some Australian Aboriginal tribes [Liberman 1985] and three years in a Tibetan monastery [Liberman 2004], he encourages us to reflect on that world taken for granted that we call reality. Similarly, as philosopher [Liberman 2007], he sees the limits of reason and the difficulties we fall into when we overconceptualize our worldly relations, when we entrust entirely to what he calls "the formal analysis", when we don't recognize the very carnal, practical and experiential character of social life. Starting from this basis, the paper offers grounds for reflection on the field of information systems. In the second part of this publication, Gianluigi Viscusi, Ylenia Curzi and Gian Marco Campagnolo discuss the role of formal representations in information systems, action-research framework and fieldwork, and the possibility of research which addresses post-local concerns.

2. HEIDEGGER'S NOTION OF BEFINDLICHKEIT AND THE MEANING OF "SITUATED" IN SOCIAL INQUIRIES

KENNETH LIBERMAN

Four months ago Gian Marco Campagnolo sent me an email inviting me to speak about phenomenology to the group here, and I emailed to Gian Marco, "Yes, I know a good deal about phenomenology, but I know nothing about Information Systems: how can I learn what would be relevant to say to them? I said I was interested because I had a long friendship with the chair of our Computer Science Department and also I had three colleagues that are ethnomethologists - Lucy Suchman, Jack Whalen and Marilyn Whalen – and who have done interesting research for Xerox about how people actually use Xerox machines. I am aware of their work and I am also aware that I should know more."

I have, however, been spending most of the last twelve years studying the practices of reasoning of Tibetan monks, including spending three years in a Buddist monasteries, so I am not very up to date on what information systems research has been accomplishing, so I asked Gian Marco again, "How can my participation be useful?" and he replied that there is a group very interested in phenomenology. He sent me an article by Claudio Ciborra to introduce me to the interest of ALPIS in phenomenology, and so I said yes. It was then that he informed me that I was to speak the first night. I rejected that idea, saying that if someone does not know what the people are thinking, you want him to speak late in the program. I added that I was certain there would be something of relevance I could say after listening to all of the papers, but it was an unreasonable expectation for the first night.

Then I began reading Ciborra's article, "Getting to the Heart of the Situation: the Phenomenological Roots of Situatedness," and I ran across this passage from pages 5-6:

"References to phenomenology are often made, but never quite fully explored and exploited. Collateral aspects are mentioned, such as transparency, ready-to-handedness and so on. Yet nobody quotes Section 29 of *Being and Time*, where Heidegger [1962, pp. 172-182] introduces the notion of situatedness (*Befindlichkeit*), contrasting it with the privileged role attributed then (and now) to understanding, cognition and the purely mental. … Lack of proper references to phenomenology while using its ascendance may also induce the reader not versed in philosophy to believe that what these authors say about situatedness is indeed all that phenomenology has had to say on the subject."

So I considered, if they want to know more about phenomenology and one of their founding thinkers has recommended reading Section 29 of Heidegger's *Being and Time*, then instead of offering more talk *about* phenomenology, our meeting could be an occasion for reading some phenomenology. And I could think of no better selection from Heidegger than the Section 29 cited by Ciborra.

Ciborra's paper "Getting to the Heart of the Situation," could be re-titled, "How did *Befindlichkeit* come to be 'Situated', and what has it lost along the way?" Ciborra complains about what the Americans, like Suchman, do with Heidegger when they undertake "situated studies". I have some sympathy with Ciborra's lament here. As a social phenomenologist I can say that I have spent much of the past four decades wincing whenever I heard or read sociologists, anthropologists, linguists, etc. use the term "phenomenological". During this time, the thin, shallow use of the term "phenomenology" is probably the principal reason I have rejected the manuscripts that I review for various journals and publishers.

So, let us examine Heidegger section on "Being as Attunement". My discussion is divided into four parts: (2.1) What is the big deal about *in situ* studies?; (2.2) The Problem with Over-conceptualizing, and the Limits of *Conoscenza Teoretica;* (2.3). *Befindlichkeit;* (2.4)The Limits of Formal Analysis.

2.1. What is the big deal about in situ studies?

How can something so subjective have had so much influence? For the significant reason that the way that most of our models represent the world is deeply flawed. This includes not only our models as analysts but also the lay models that ordinary people and professionals alike employ in their everyday life.

Our lives are lived subjectively. And our models do not account for the way we actually live our lives. They idealize matters, and the real work is made invisible; worse, the real work is obscured *by* the aggressive employment of our most cogent models. Worse still, the more cogent the models are made, the more obscuring they do. The actual social medium of our ordinary work of organizing local situations is rarely visible to the analyst, *or to the practitioners*, in just the way that water is unnoticed by the fish who swim in a stream. One of the reasons is that the influence of the Enlightenment survives today in the form of a compulsion to make things out to be more definite and certain than they really are. And here even the realists are lost within an idealism.

There is no fact, no "objective" that is not accompanied by an interpretation; therefore, there can only exist a subjective objective. There is objectivity, but it is always an interpreted objectivity. I ask my students sometimes: "What is the difference between a fact and an interpretation?" They have all these pop theories that they offer me, but by the end I manage to convince them that most facts are interpretations. We have a great need for objectivity, not only for pursuing reliable knowledge but also for making it possible to communicate with each other; but the objectivity we need is always and necessarily a subjective objectivity. You cannot find an objective objectivity. If you pretend that you have one and deny the subjective aspects of objectivity, then by denying the way the world really is you are in fact being less "objective" and more prejudiced than those who recognize the subjective role of understanding things. This is in fact "the Crisis" that Husserl writes about in his last great work, *The Crisis of the European Sciences, and Transcendental Phenomenology.* The "transcendental" here is a reference to the co-presence of subjectivity and objectivity.

More importantly, our lives are much more complicated than the purveyors of planful thought and rational choice theory would have it. The complexities of any ordinary life *in situ* renders most of the modeling of cognitive scientists foolish. There is time here just to mention one reason why, and that is the *reflexivity of understanding*: understanding is rarely the deductive process that Isaac Newton would want to talk about. Reflexivity refers to practices that *at the same time* describe *and* constitute a social framework because we have the ability to find whatever we describe – or rather, our practices of understanding constitute the framework *while* they describe it. That is, the describing is the constituting – the practice of employing an interpretation in our practical lives is what constitutes the framework, as it describes that same situation. Basically, our practices of understanding are finding themselves. The understanding is always describing itself. And I wish to direct you not only to researchers like ourselves. Although is certainly true for us, I am speaking of people in their ordinary lives.

In the case of the research of Lucy Suchman, I am talking about the people who use Xerox machines and try to understand the latest version of instructions on the LCD screen that the machine displays. People have no choice but to employ whatever understanding they have of xeroxing by fiddling around with the displays on the touch-screen and pushing buttons or whatever they think it is going on. No matter what, they are going to read into the situation what they think they know, and find a way to get the work done. And in most cases the work will get done, but there will be a great deal of serendipity to it. Most interestingly, the way they get the work done on the Xerox machine may never have been anticipated by the people who designed the machine or those who designed the instructions. The former Secretary of Defense of United States might have included what Xerox's designers didn't know among the "unknown unknowns." Reflexivity is that feature of comprehending some structure of social action that presupposes, *while it provides and provokes*, the conditions that make its own intelligibility sensible. Phenomenology is very much taken up with the practical tasks of finding and maintaining the intelligibility of local situations *in the course* of being in them, i.e. the *in situ.*

Most planful accounts miss the reflexivity of quotidian life, which is the moment-by-moment adjustment and feedback between situation and reflection, something so spontaneous that it cannot be predicted in advance. Accordingly, oftentimes planful accounts are unable to locate the real problems that people have to face, and so we get instruction manuals that no one is able to understand.

All this was something of an embarrassment to the organizational theory used by information systems researchers. So talk of "situated" studies began, in many instances led by ethnomethodological research projects that located the "troubles" that were to be found in local occasions, projects that exposed to analysts the work of the reflexivity of understanding.

Because of reflexivity and other phenomena like it (such as the indexicality of meanings) textbook versions rarely reflect reality. Let me give you three illustrations of what I am talking about.

1. The Oregon state highway department has a planning division that handles all the sign painting, traffic routing, painting of lanes, the setting up of signal systems for traffic flows of automobiles, et cetera, in the State of Oregon (USA). Around 1986, they came to the conclusion that all good ideas should be "put on the back-burner," which is American slang for "No matter how brilliant your theory sounds: don't implement it until you actually do a pilot study." The pilot studies are instituted for a short period of time (three-nine months is typical) in a test location before initiating more widespread application that could create messes all over the state that would then have to be cleaned up. The Oregon state highway department has learned, as part of their practical work, never to administer a new policy of lane-painting, sign-posting, signal systems, traffic-routing, etc. without first implementing it on a trial-only basis. This is for the very good reason that they have had long experience with the unanticipated consequences of their previous brilliant planning that created disasters that they were forced to undo. There are *so many* of these unanticipated consequences that they concluded that these consequences are *not anticipatable*.

2. The people who write computer programs have similarly learned not only that they cannot predict where the bugs in the program will occur, they also cannot predict what clever things

they have devised, until the people who use the beta versions report back to them. The beta versions offer opportunities to tell the designers what they have designed. These reports on beta versions even teach them how they should market the programs and which people and groups to market it to. They find some bugs but they also learn what it was they really achieved. There is now a universal reliance on beta versions, and I interpret that as a frank admission that you can not plan for everything.

3. The man who worked for the 3-M company who invented post-its was reading a technical book on an airplane and kept losing the place in the book where the footnotes were. So when he returned to the lab, he invented post-its. He didn't have the slightest idea he would change how every office in the world worked, and would also change the face of every refrigerator on earth; but he is happy to accept the credit for his wonder just the same.

These illustrations give you the idea that "situated" studies are oriented to discovering what the plans did not plan for. And they can only be discovered by going out into the world and looking. That is, you cannot recover it by restricting yourself to a review of your best theorizing. This is what the big deal about "situated" studies is about: situated studies are oriented to discovering what the plans didn't plan for.

2.2. The Problem with Over-conceptualizing, and the Limits of Conoscenza Teoretica

What Heidegger calls "Attunement" (Il Trovarsi) is one of the fundamental three existential facts of life of what he calls being-in-the-world – the other two fundamental existential facts of being-in-the-world are "Understanding" and "Discourse."

Attunement is the name for what is *being* more than *knowing*: attunement does not *know* why (127a) it is … "Non si *sa*. Sono cose che l'esserci non può sapere" (It 389b/ G 134b). The idea is that we already are in a situation doing something *before* we *know* about it, and the problem with cognitive scientists as well as with rational choice theorists in sociology and political science is that

they have a model for how human beings act that examines phenomena that occur only from the chin up. For them people do have bodies, which is the point of Ciborra's "Heart" in the title of his work.

I have spent five years in India, and I have read a good deal of classical Indian scholarship, not only Tibetan scholarship in Tibetan but also a lot of Vedanta epistemology. India has a long tradition of scholarship going back before the time of Christ. They are very rigorous, almost too technical, but they are oriented to trying to find out about *being*, and they try to keep their *knowing* about being from preventing their winning reflective access to *being*. They have been dealing directly with the very problem I am addressing, and it is quite interesting to consider their work in this area. I think this is part of the reason why that many philosophers of the West do not consider what Indians do to be "philosophy." For most European scholars, and for many of my colleagues, philosophy properly resides above the chin. When I once confronted a brilliant Sanskrit-speaking Vedanta scholar in India over a luncheon table, asking him whether he felt offended that Western scholars do not consider what he does to be philosophical, he told me, "They are right. It is not philosophy. We are not interested in philosophy: it is too mechanical and heartless a pursuit."

Derrida is following Heidegger's lead when he keeps seeking ways to infect his inquiries with what he calls "non-knowledge." And we social scientists need to do the same, since there is so much going on in social organization that is not conceptual. We need to put more effort into studying non-knowledge, which accounts for a majority of what people do.

According to Heidegger, in Section 29, "Discourse does not, as such, mean to be known" (127b/ G 134c). And, "The possibilities of disclosure to *cognition* fall far short …" (1217a). He is not saying that there is not discourse or cognition, but there is so much else going on that we need to pay close attention to it as well.

At the same time these passages occur in Section 29, Heidegger sternly warns us against becoming 'touchy-feely.' Having taken a stand against common sense as well as against formal theoretical cognition, Heidegger still insists on *rigorous*

attention to the just-what of the actual experience *in situ*. This is what is meant by phenomenology. Heidegger writes (130b), "We must not confuse demonstrating the existential-ontological constitution of cognitive determination in the attunement of being-in-the-world with the attempt to *surrender science to feeling*."

"Non si vorrà scambiare la dimostrazione esistenzial-ontologica che il determinare conoscitivo si costituisce nel trovarsi nell'essere nel mondo, col tentativo di consegnare onticamente la scienza nelle mani del sentimento".

This rigor, our rigor, consists of paying attention only to "evidence" (German: *Evidenz*, Italian *Evidenza*), which is one of the basic notions of Husserl's program of rigorous inquiry. Formal analytic accounts *miss* this *Evidenz* due to the myopia created by their continuous preoccupation with their theorizing. Evidence grounds understanding: it is what comes *first*.

Heidegger also tells us, "Disclosedness does not mean 'to be known'". We cannot reduce our experience to conceptual knowing. One must already have found oneself in a situation when one commences to know. We need to study the *how* of this *finding ourselves* as well as studying the knowing, and our problem is that we are studying only the knowing. Heidegger tells us that we are not to minimize the *Evidenz* of attunement "by measuring it against the apodictic certainty of the theoretical cognition" (128b). I do not have time, but I could give you the wonderful discussion that Emmanuel Levinas has provided us about the itinerary of ethics and morality in Western philosophy and how they have lost their connection to evidence and have been turned by philosophers into a strictly logical and formal analytic enterprise. So I will just mention it, rather than giving you the details on this occasion.

Merleau-Ponty, who is probably the phenomenologist who is most faithful to Husserl, expanded these inquiries in his project of non-dualistic reflection, especially in the amazing book he wrote at the end of his life, *Le Visible et L'Invisible*, where he explains his notion of "*sur-reflection*."

"We are catching sight of the necessity of another operation besides conversion to reflection, more fundamental than it, of a sort of "*sur-réflection*" [that] would not loose sight of the brute thing and the brute perception and would not finally efface them,

would not cut the organic bonds … [of] our mute contact with the world when they are not yet things said…. It must plunge into the world instead of surveying it."

Heidegger said something similar in Section 29: "Theoretical looking at the world has always flattened it down to the uniformity of what is purely objectively present." [p. 138]. The Italian (It 401) is "Lo sguardo teoretico ha già sempre schermato il mondo sull'uniformità del mero sottomano…" That is, there is a leveling off that theory does that is the "bottleneck" of standardization that Jannis Kallinikos has spoken about [Kallinikos 2009].

Heidegger is sophisticated enough to recognize that theoretical cognition brings benefits as well as constraints. Continuing the Italian, "…un'uniformità dentro la quale, certo, è contenuta la nuova ricchezza di tutto quanto può essere svelato da un puro determinare". Or in English, "… although, of course, a new abundance of what can be discovered in pure determination lies within that uniformity." That is, it is also to be appreciated that there is an acknowledgement of the brilliance of formal analytic theorizing, a brilliance that we do not want to surrender. So the incredible situation that we are in as *Homo sapiens* (the humans who know) is how do we use formal knowing *without* letting it create a prison that we cannot escape. It seems there is more sapience that we *Homo*-s need to do. As human beings we are still at our task.

What is this abundance, this *richezza di conoscenza teoretica* that "pure determination" brings us? And why is it that formal reason brings such abundance at the same time that it closes us off to the complexity of real events? We are not dispensing with formal analytic reason here; we are only teaching ourselves how to use it more wisely.

Professor Giolo Fele and I are undertaking a study of coffee tasting. In particular we are examining how *assaggiatore di caffè* organize the intelligibility of the formal coffee descriptors they use. The formal terms they use, like "rich", "medium bodied," "acidic," "rotondo," "fiorito," "vellutato," etc. all permit them to locate tastes and stabilize the intelligibility of their sensory experience. We are also studying the benefits and limits the use of quantitative scales for tastes play in the coffee industry. We are

doing a real phenomenology of coffee tasting. We have already discovered that alongside making it possible for them to find, purchase and verify shipments of first-rate coffee, these terms affect the tasting. They close off some tastes, which have a difficult time being noted, while other tastes receive abundant scrutiny, to the point that the tongue is taught a great deal about how to find and distinguish precise flavors.

One of Italy's principal *assaggiatore di caffè* speaks of the tasting card in *both* positive and pejorative terms: "The card certainly plays an important role in guiding the judging procedures that apply. However, we must remember that it is only a tool, and the taster is responsible for recognizing and evaluating organoleptic characteristics. … The second [card] is based on thorough research aimed at modernizing the card by insisting that sensorial analysis is conducted with strict rules." In Italian:

"Non bisogna mai dimenticare che essa è solo uno strumento da capire e da utilizzare, la rilevazione delle caratteristiche organolettiche, la loro elaborazione in giudizi e la successiva espressione è di pertinenza del degustatore che mai potrà scaricarsi di questa responsibilità … la seconda [scheda], realizzata sulla scorta di una forte ricerca volta all'innovazione e in considerazione delle severe regole dell'anilisi sensoriale." The seeming contradiction here is *not* a flaw in the procedure – formal analyses always and *necessarily* provide "*elaborazione in giudizi*" while at the same time cannot be made to substitute for the "*responsabilità*" to actually taste. As professional thinkers, we are continually trying to accomplish this very thing.

2.3. Befindlichkeit

Evidenz demands that we first taste, and *Befindlichkeit*, or Attunement, pays respect to an understanding that is more doing than it is knowing. It involves rigorous discipline, and just because the discipline is in life and not in words does not mean that it is not vital. "Attunement" is rendered in Italian as *trovarsi*, which is a reflexive verb. Reflexive verbs are really splendid things, because they already undermine the human conceit that we are always in

control of affairs. Take a verb like *annoiarsi,* "to become bored." The logic of reflexive verbs better represents the actual situation than the non-reflective English.

In the case of *Befindlichkeit*, it is a state one finds oneself in without any deliberate doing. As Heidegger (129) tells us, "[Mood] never comes from 'without' nor from 'within,' but rises from being-in-the-world itself." Here Heidegger is referring to times when we grow tired of ourselves, when our being has become manifest to us as a burden, such as when we are bored.

A closely related term that Heidegger uses is *Umsicht*, or "circumspective attention," "*la circumspectio*" which is not quite "*sapere,*" "*conoscenza,*" or "*conosciuto.*" This is a preliminary taking of bearings that people do to find a context before they settle into it. It implies a broad sweep, and Heidegger contrasts it with the more invasive, paternalist strategies of technological manipulation.

2.4. The Limits of Formal Analysis

Much of the foundational experience that Heidegger is describing is not readily made the subject of formal investigations, at least not without distorting its basic character beyond recognition. Ciborra (p. 12) writes of Lucy Suchman's findings:

"Her empirical study confirms that the organization of situated action is an emergent property of the moment-by-moment interactions between actors and their relevant environments. Expert systems are built on a planning model of human action. 'The model treats a plan as something located in the actor's head.'"

The proponents of "planning models," which includes artificial intelligence designers and rational choice theorists but excludes the Oregon state highway planners, try to resolve difficulties by attempting to *embed into expert systems more and more sophisticated plans.*"

An exclusive reliance on more expert systems loses sight of Heidegger's discovery that Dasein finds itself in a situation before beginning to reflect analytically, that a world *already* "matters to it" (129b) ("potere-essere-toccato", It. 399b) before knowing. And

this is where occurs most of the confusions experienced by the users of Xerox machines that are documented by Suchman.

Dasein has always found itself "always already" (128a/ già sempre trovato, It. 391c) in a finding which does not come from a direct seeking (trovato in un trovare che non scaturisce tanto da un diretto cercare). Heidegger comes down very severely on this '*diretto cercare*'. But this is just what most of our research consists of! Even my work in ethnomethodology is full of 'diretto cercare,' which will increase the likelihood that that I miss the dimension that is most important, at least according to Heidegger.

The more that formal analytic investigators inspect a situation the less they will see. Heidegger (127c) observes, "The that of facticity is never to be found by looking." The Italian is, "Il fatto-che della fatticità non è mai reperibile in un vedere intuitivo" (It. 391b). That is because looking - un diretto cercare - is already looking for something it has in mind; that is, one already has the frame of the experience built – one's mind is so full of what one already knows that one cannot see what one does not know! Why do we want to do research, if we do not want find out what we do not yet know? It may be called "positive science," but it is deluded just the same. The Tibetans I lived with have a great name for such delusion: they call it "ignorance" (*ma rig ma*). For Tibetans, it is not what you don't know that makes you ignorant, it is what you *do* know. That is, one's mind is so filled with the certainty of what one does know that there is no room to learn anything new. Especially, there is no room to learn what one does not already know.

There is no better model to be found for the imperialism of planful theorizing than in the social theories of Thomas Hobbes, John Locke, and John Stuart Mill. They offer an extreme rationalism whereby humans are born as separate individuals, come together out of their own free will, and then commence to abstractly negotiate their rights in a social contract. This is nothing more than a "just-so" story about the origin of society. People know nothing more than what these rationalist theorists put into their heads. It may be that people do not *know* more, but they *do* a great deal more than Hobbes, et. al. are able to account for. And this "more" is fairly well addressed by Heidegger in Section 29.

There is planful action as pre-determined rationalities, and then there is planful action as the actual course of the situated action, as *bricolage*, as *difference*, as reflexivity, and all the other ways we are learning to think – or not to think – about these quotidian activities that are the preoccupation of information system researchers. In his masterpiece *Negative Dialectics*, Theodor Adorno speaks of *mimesis*, a mode of social being that precedes formal reflection, and he considers it more critical to understanding than conceptual knowing (and we should not fail to note here that Adorno was a sworn opponent of Heidegger for all of his professional life).

Heidegger's fecund recommendation is instead of commandeering events, instead of "staring out at something" (129b) with "un guardar fisso"/ "*Empfinded oder Anstarren*" (It 399a /G137a), we should regard things in "a circumspectfully heedful way" (Il pro-curante … circonspettivo). In this way we can listen to the phenomena we are studying and not exclusively take charge of organizing the intelligibility of it in advance, like we are running the railways.

2.5. Conclusion

This does not mean we have to leave off of formal analysis, but it does mean that we must first attune ourselves to what is there. Or if we are doing social research, we must first witness how others attune themselves to what is there, *and we must find their there* (not our "there"). That is, using Husserl's language, our professional task is to identify and describe what are the horizons of their experience, and especially what are the horizons of their understanding that are at work for the people we are studying. Only then will our professional advice be pertinent to the organizational tasks that people are facing in their quotidian life.

An important question for those who wish to work in a phenomenological way is how do we get access to the non-rational? This is a thorny question since the tools we have to work with are mostly rational tools. So how do we adapt them and make them sensitive to the actual "work" that people are doing in

their everyday, practical lives? There is a vital clue for us in the concluding passage of § 29, in which Heidegger writes, "The phenomenological interpretation must give to Dasein itself the possibility of primordial disclosure and let it, so to speak, interpret itself." (131b). 'Letting things be' is the theme Heidegger writes a great deal about in his post-World War II writings, but it is only another way of reciting the principal phenomenological slogan from *Being and Time*, "To the things themselves!"

Our work of making social inquiries is not irrelevant, because we have the important descriptive task, Heidegger tells us, of raising "the phenomenal content of disclosure existentially to a conceptual level" (in Italian, "elevare al concetto l'importo fenomenale cosí dischiuso," It. 403). That is, our thinking must be kept appropriate to the events we are describing, and we must avoid submerging those events beneath our brilliant plans and theories, but we still need to reflect formally upon them.

So now have our most serious task – how do we teach each other speak objectively about these subjective things?

3. AFTERWORD

GIAN MARCO CAMPAGNOLO[1], YLENIA CURZI[2],
GIANLUIGI VISCUSI[3]

"Understanding is rarely the deductive process that Isaac Newton would want to talk about." [Liberman, Alpis 2009]

In his contribution to this book, Kenneth Liberman furnishes a series of concepts and hypotheses for the interpretation of concrete social phenomena. He also puts forward a number of suggestions concerning the strategy to be adopted by social research which seeks to support social and organizational practices in the solution of real and concrete problems.

The aim of this afterword is to be an "ideal prolongation" which proceeds in three directions in analysing the concepts, hypotheses, and research strategy put forward by Liberman. More specifically, the first section shows how the concepts proposed by Liberman make it possible to recast the idea and the use of formal representations – which part of the literature on information systems considers to be at odds with situated actions and analyses – in a manner consistent with an approach to the study and design of information systems based on emotionally situated understanding.

The second section concentrates on 'action research' – namely that form of empirical research which seeks to combine theory and practice, research and action for change – and it investigates the consequences of the orientation of such research to the cognitive strategy proposed by Liberman.

Finally, the third section highlights the changes which have taken place in the practices of producing information systems for

---

[1] Gian Marco Campagnolo is author of Section 3.3.
[2] Ylenia Curzi is author of the introductory paragraph and of Section 3.2.
[3] Gianluigi Viscusi is author of Section 3.1.

organizations. It argues that, although these changes do not challenge the validity of Liberman's phenomenological theory in regard to the interpretation of software production practices, they nevertheless require its integration when such practices are connoted as contemporary and post-local social phenomena.

3.1. From formal representations to subjective objectivity: evidence and reflexivity in information systems as an area of research

Clarification of the meaning of analysis in situation of an information system necessarily requires examination of the role of the researcher and the practices that enable him or her to access the context to be analysed. In this regard, Kenneth Liberman's article in this book is already important because of the question with which it starts: "How can my participation be useful?".

However, it is first necessary to provide a brief description of what is meant by information system. Among the various definitions proposed in the literature, we regard as sufficiently complete and useful for our purposes the one proposed by Buckingham, Hirschheim *et al.* [1987], for whom an information system is: "[…] a system which assembles, stores, processes and delivers information relevant to an organisation (or to a society), in such a way that the information is accessible and useful to those who wish to use it […] An information system is a human activity (social) system which may or not involve the use of computer systems[…]". Firstly, this definition highlights what is meant in general by the term system in the expression 'information system': The set of actors (people, objects, procedures, etc.) that interact to obtain, produce, and distribute information useful to the participants/users. Secondly, it specifies that an information system does not necessarily have to make use of a computer (or ICT, as one would say today). In particular, an information system has the use of information as its purpose. Following Batini, De Petra *et al.* [2008], we consider information to be everything that produces a change in a person's stock of knowledge; whilst data can be defined as "recordings of the description of some characteristic of reality on a support which

guarantees its conservation, and by means of a system of signs which ensures its comprehensibity and retrievability" [Batini *et al.* 2008 - translation of the author]. Information is therefore such because it is significant and comprehensible to people or groups of people, whilst data refer to the support on which those data are recorded and the language with which they are described [Avison; Fitzgerald 1995; Batini *et al.* 2008]. Information and data are therefore closely connected and stand in a systemic and formal relationship with the other actors involved in an information system. However, corresponding to this integrated view is a specialization of the research consisting in studies which analyse, on the one hand, the economic-organizational aspects of information (an information system as an organizational system), and on the other, aspects more closely connected with the processing of data and information by means of technologies (information technology system). This fragmentation gives rise to a separation which, in Heideggerian terms, is a forgetfulness which entails consideration of the various entities encountered in analyses of information systems in terms of 'simple presence' or 'presence at hand' [Heidegger 2006]. To consider entities in their simple presence is to privilege a type of formal knowledge that distracts the researcher from the evidence that the world is always open to an emotionally situated understanding reducible only at the cost of a loss. In fact, the attention is often mostly focused on "formalised information systems" [Avison *et al.* 1995] through formal approaches based on rules and clear structures rather than on logical-mathematical models. In this regard, the study by D'Atri, Spagnoletti *et al.* [2009], which analyses the MIT Beer Game as specifically adapted to training in supply chain management, well emphasises the value added and the situational limitations of formal approaches like simulations: "The MIT Beer Game and our versions experienced similar limitations: firstly, the difficulty of providing a realistic vision of the supply chain management. Secondly: it is true that the game structure (where middlemen are placed on parallel lines) allows the retailer to choose suppliers but despite this, it cannot be compared to the actual complexities of a supply chain [D'Atri *et al.* 2009]."

The question of the formalization of thought [Liberman 2007], or of formal representations, is therefore the background which

makes Liberman's theoretical contribution useful to the research community on information systems, also and especially because of the epistemological status of information systems as a discipline. In fact, this area of inquiry seems to figure among the human sciences considered in the sense envisaged by Michel Foucault in The Order of Things [Foucault 1966]. From this perspective, the human sciences arise from the interstices among (i) mathematics and physics, (ii) the sciences that seek to define human beings in the terms of their lives (biology), their language (linguistics), their work (economics), and (iii) philosophy. Our purpose here is not to conduct detailed analysis of the perspective introduced by Foucault [1966], but rather to highlight the borderline nature of the human sciences, which make use of concepts and methods from the above-mentioned disciplines but do not identify with any of them: "at one level or another, [they use] mathematical formalization; they proceed in accordance with models or concepts borrowed from biology, economics, and the sciences of language" [Foucault 1966, translation of the author]. What is distinctive of the human sciences, finally, is that they furnish *representations* of each of the dimensions proper to their adjoining disciplines [Foucault 1966]. Given these premises, the role of the models and formalizations – that is, of representations – allocate a particular place among the human sciences to information systems, where the concept of representation solicits their analysis and design. Important in this regard are the findings of Kern, Zirpins *et al.* [2009], who show the challenges that architectures oriented to services and technologies raise for the rationalization of work and the definition of appropriate quality standards, with potential consequences for the concept itself of work as it arose in industrial society, but also as it is today in the services society. Such systems, in fact, alter the very notion of work routine in terms of schedules, skills, and contracts between employees and employers, and they redefine business models and professionalism. In this context, it is necessary to understand the consequences produced by the forgetfulness of emotionally situated work, namely the fact that abstract, formalized and standardized tasks are considered tout court *the* work. Whereas, they are generated from living and emotionally denoted work activities, not easily de-composables. Indeed, these service

oriented and collective work systems overcome the lack of scalability of the situated work by detaching representations of activities that can be (potentially) infinitely disaggregated and recomposed.

The role of formal representations has been at the centre of animated debate in the area of information systems [Ciborra 2002; Suchman 1987; Winograd 1987; Flores 1987]. The main objective of the debate has been to show the limitations of a certain vision of rationality, often denoted with the generic heading of positivism, whose naiveté, as rightly pointed out by Liberman in a philosophical context broader than that of information systems, resides in the fact that it investigates "the truth of a world that is presumed to exist just in the way it is being interrogated" [Liberman 2007]. Experience is somehow obscured and forgotten as the source of the theory, which changes from being explanatory to foundational and cogent at the ontological level: that is, as already given and as the truth of experience. Heidegger's thought has provided important theoretical support in this regard [Winograd *et al.* 1987] by showing how enunciations have been considered the repositories of truth in the history of metaphysics, but neglecting that truth originates in the interpreting and understanding being-in-world. That which in very general terms is to be emphasised here is the relationship between enunciation (considered as formalization) and theoretical knowledge. To simplify, Heidegger considers theoretical knowledge to be a descriptive attitude to the truth of entities, without their consideration within the set of references that characterize their usability. In theoretical knowledge the world emerges as being-at-hand (Vorhandenheit), and the truth of entities is communicated through enunciations (Aussage). In this regard, Liberman quotes the following passage from Being and Time (in the Italian translation: "[...]lo sguardo teoretico ha già sempre schermato il mondo sull'uniformità del mero sottomano[...]" [Liberman 2007]. In a certain sense, therefore, theoretical knowledge isolates understanding from the other modalities of the Dasein [Heidegger 2006], particularly by separating it from the affective situation which indicates that being exceeds knowing. Although criticisms of the rationalist perspective typical of positivist approaches to research do not add a great deal to what has already been said in

the debate engendered by publication of the book by Winograd *et al.* [1987], Liberman's reference in his article to a text by Ciborra [Ciborra 2006] is a step forward in identifying another 'naiveté' little emphasised by criticism. Ciborra shows that also approaches to the situated analysis of information systems fail to grasp the 'core' of practices, and thus reduce the extent and originality of the emotional situation [Ciborra 2006]. Moreover, the relative novelty that Liberman seeks to emphasise is, in a certain sense, the fact that Heidegger shows how to overcome the opposition between the objectifying views distant from the evidence (Evidenz) which should be at the basis of research – i.e. attention to experience in situ – regardless of every partial representation or theoretical model applicable to it considered in terms of realism. Heidegger, in fact, warns against confusing the existential-ontological demonstration of theoretical-cognitive knowledge based on the emotional situation with the subjugation of science to feeling. This would be to replace one 'naiveté' with another. It is instead necessary to acknowledge the partiality of the theoretical knowledge that always arises from interpretation of an understanding emotionally situated in the world. Rigorous research must therefore relate the entity given at hand – the object of theoretical knowledge – to the interpretation on which it is founded. In this regard, Viscusi [2009] seeks to show the value of a methodology able to maintain the correct critical distance between formalization and the context of intervention in the planning of eGovernment initiatives. It is necessary to recognize, as Liberman shows, that there is no objectivity which is not accompanied by interpretation; there is always a 'subjective objectivity'. Here 'subjective' does not refer to cognitive activity, but rather to local situatedness in a context of emotionally characterized practical referrals. Consequently, formal representations should not be eliminated and replaced with partial and objectifying perspectives which define what situated experience is a priori. Rather, in research on information systems and their design, it is necessary to render data and formal representations into "living classifications" [Bowker; Star 1999]. To be stressed here is the importance of the reflexivity of understanding whereby, as Liberman puts it, "the understanding is always describing itself".

The theme of the reflexivity of understanding and of the models adopted in organizations or in social research has been addressed by various authors [Bourdieu 1992; Giddens 1984; Orlikowski 1992; Rabinow 2008]. To be emphasised is that recognizing the reflexivity of understanding is an important prerequisite if formal representations are to be used to gain access to the practices distinctive of a particular context of action. Relevant here is the concept of 'boundary object' [Star; Griesemer 1989], which refers to those particular objects that make it possible to develop, maintain and integrate knowledge deriving from different 'social worlds'[4]. 'Boundary objects' may be material objects, but they may also be abstract ones such as organizational forms, procedures, maps, categories and schemes of classification. Given their capacity to assume different meanings in heterogeneous social worlds, whilst maintaining a common and translatable meaning, 'boundary objects' are considered to be interfaces for the production of knowledge, and they are often constructed and naturalized as ecological systems [Bowker *et al*. 1999]. 'Boundary objects' are therefore in the first instance physical boundaries – that is, artifacts in which are inscribed what we have identified as 'conceptual boundaries' or 'formal representations' able to guide actors. Such conceptual 'boundaries' may perform the twofold role that Schmidt [1997] has identified for formal constructs in cooperative work. On the one hand, according to a conception that gives a 'weak' role to such constructs in real situations of interaction (in that they are 'external to those situations and not reducible to them), they are maps furnishing an encoded representation of the domain and the activities performed within it. On the other, according to a normative conception of formal constructs, they are scripts furnishing on the one hand a limited selection of valid, permitted and safe actions, and on the other – by difference and exclusion – a series of actions which are not allowed or inadvisable. In both cases, formal constructs understood as either maps or scripts are resources and constraints – affordances [Gibson 1979] – in physical and social circumstances [Schmidt 1997].

---

[4] On this see Hughes [1970].

Braccini [2009] provides an example of how a system can support the sharing of knowledge in the way that archaeologists manage and conserve the artistic and cultural heritage. In this case, an integrated information system acts as a 'boundary object' for its various users (archaeologists, archivists, renovators, etc.) because it enables them to create personalized views, and to add new data by structuring them according to the contextual requirements of technologies like RFID. The representation therefore supports the traceability of the archaeological find by basing it on the experiential context, never reifying it into a specific and unalterable formalization.

In the case of information systems, therefore, we have a twofold instance of translation and integration: on the one hand, there are different communities of users; on the other, the need to formalize discursive practices so that they can be processed in an information technology system[5]. Classification systems thus make it possible to model shared domains, but they also assume the features of technologies of the self [Foucault 1975] in that they lose the flexibility of 'boundary objects', becoming standards with political and social implications, and losing the traces of their construction through discursive and non-discursive practices deriving from heterogeneous communities. Hence, when a formal representation loses the evidence of its reflexivity and presents itself as the only possible truth; indeed, a truth which concerns what it has to explain, but which, from this perspective, must already presuppose it.

Liberman accordingly shows us how phenomenology can favour the use of formal representations in a truly situated approach to the study and design of information systems by clarifying the role of the reflexivity of understanding and the significance of the evidence of an emotionally interpreting subjective objectivity.

---

[5] According to Carlo Sini, every writing brings out a threshold of the world, which it depicts. For mathematical writing, in which we can discern the origin of informatic writing, this threshold of representation is the scheme "by which the world is schematized (its specific miniaturization)" [Sini 1997]. The danger lies in absorbing the depictable (the world) in the depicted (in this case the scheme) so that the origin of the meaning depicted may be forgotten.

3.2. Research and intervention upon social and organizational systems: what strategy of study?

'Action research' is a form of empirical research in which there are indissoluble linkages between theory and practice, research and intervention, knowledge and change [Albano, forthcoming]. Action research, in fact, consists in analysis and reflection conducted in (social and/or organizational) practice. Its purpose is to produce knowledge useful for the solution of a concrete problem, and it is instrumentally oriented to change [Albano, forthcoming; Bonzanini; De Masi 1984; Gilli 1971; Lewin 1946].

This brief outline serves to frame the direction of analysis suggested by Hermann [2009], Wagner *et al.* [2009], Bratteteig [2009] and Liberman [2009] in papers given at Alpis 2009, the first ones in the session devoted to action research, the last in the opening session.

The proposal by Hermann [2009], Wagner *et al.* [2009] and, at least implicitly, by Bratteteig [2009] can be summarized as follows. If action research is to produce knowledge useful for the solution of a concrete problem, it should be conducted in a manner which makes it possible to bring out and consider the multiple, different, and often conflicting points of view of the agents in a social/organizational system with respect to the possible desired directions of change, the ways to achieve it, and the specific characteristics of the situation studied. As evidenced by Wagner *et al.* [2009] in particular, this yields a shared understanding of the problem and a shared notion of the solution.

Liberman's [2009] paper does not specifically deal with action research. However, it puts forward a suggestion that we may set in relation to those made by the other contributions cited, namely the recommended orientation to a strategy of study such as expressed by the following concepts drawn from the phenomenology of Heidegger and Husserl: Befindlichkeit, Evidenz, Umsicht. According to this strategy, the task of the researcher is to discover and describe the plurality of horizons of experience and interpretation (points of view, we might say) of the various agents whom s/he studies in regard to the situation studied. To this end, the researcher should first 'attune' him/herself to what is happening in the situation or, better,

observe how the agents 'attune' themselves to what is happening in the situation in which they are acting. Only subsequently can the researcher organize, by means of concepts and theories, the intelligibility of what s/he has observed. Liberman [2009] stresses that precisely because of these features, this strategy allows the researcher to yield suggestions pertinent to the real problems that people face in their quotidian work of organizing the local situation.

These observations, jointly considered, prompt reflection on the implications of an orientation of action research to the strategy underlying phenomenological research as briefly described above. Our hypothesis is that if the implications of the orientation of action research to the strategy in question are to be made intelligible, it is first necessary to render intelligible the presupposition of that same strategy. To this end, given the perspective adopted, we shall concentrate on the logical structure of the latter. In particular, we shall refer to the work of von Wright [1971, chapters 1 and 3].

von Wright maintains that the cognitive strategy underlying phenomenological research consists in understanding the meaning of human and social action on the basis of the sense intended by the actors, that is, on the basis of their desires, motives, acts of will, and their intentions, reasons, and beliefs concerning means/ends relationships.

von Wright highlights that understanding can be expressed by a practical syllogism consisting of a major premise stating that an agent has the intention to bring about p; a minor premise which describes the agent's cognitive attitudes, his/her beliefs about the means required to bring about p ("A believes that s/he cannot bring about p unless s/he does a"); and a conclusion which describes a behaviour consistent with the premises ("A sets him/herself to do a" or "A does a").

Finally, von Wright argues in logical terms that it is not possible to consider the practical syllogism – and therefore understanding of the meaning of action on the basis of the sense given to it by the actors – as a form of nomological-deductive explanation [Hempel 1966]. He specifies that this latter presupposes that it is possible to explain and predict an individual fact by subsuming it under a general law which expresses a relationship of sufficient

conditionship between cause and effect [von Wright 1971, pp. 38, 58], and of which the production of the fact is an instance.

Hence, insofar as the practical syllogism does not express a nomological-deductive explanation of the action, the connection between its premises and its conclusion is not a relationship of sufficient conditionship which can be used to predict the occurrence of behaviour on the basis of the agent's known intentions and cognitive attitudes. In this regard, von Wright specifies that the necessity of the practical syllogism is conceived *ex post actu*, and that understanding of the meaning of the action on the basis of the sense intended by the actor is a construction from a given conclusion of premises consistent with it and corresponding to it. In other words, it is an *a posteriori* justification of a behaviour observed to occur; a re-construction made after or during the action of the intentions and reasons, of the motives, desires, acts of will and cognitive attitudes underlying the behaviour of actors.

What has been highlighted by von Wright clarifies in logical terms the presupposition on which is based understanding of the meaning of human and social action on the basis of the sense intended by the actors, that is the denial of every possibility of prediction and the consequent precedence given to the observation of what happens in the individual concrete case as against the organization of its intelligibility.

Moreover, the reference to von Wright's contribution makes it possible to highlight the implications of the orientation of action research to the strategy in question on the logical level. To this end, we now separately consider the phase of reflection conducted in (social and/or organizational) practice on a problem requiring a solution and the phase of action for change.

During the reflection phase, orientation to a strategy that assumes the impossibility of predicting the occurrence of a behaviour on the basis of the agents' intentions and cognitive attitudes makes it possible to take account of the fact- emphasised by Liberman [2009]- that the course of action is characterized by phenomena such as reflexivity, bricolage, and unanticipated consequences. Moreover, since this strategy assumes the impossibility of prediction, it gives precedence to the observation of what is happening in an individual concrete case as against its

interpretation through concepts and theories, thereby expressing itself in the *a posteriori* reconstruction of the meaning of what has happened. Therefore, the orientation to this strategy offers the opportunity- highlighted by Liberman [2009]- to discover and learn what is not already known and does not conform with a previously constructed conceptual scheme. Finally, it allows account to be taken of those unique elements of the course of action which escape the idea of "conformity with a *genus*" and therefore the subsumption under a general law. Put otherwise: because of the presupposition of the strategy in question, which implies that it expresses itself in the *a posteriori* reconstruction of the meaning of action in a particular concrete case, the orientation of action research to this strategy offers, in the reflection phase, the opportunity to take account of aspects of the phenomena observed which are not grasped when action research is oriented to the positivist strategy based on the opposite presupposition.

The presupposition that offers these possibilities during the reflection phase precludes others in the phase of action for change. In fact, if change (the solution of a concrete problem) is considered to be the aim pursued by the actors, the orientation to the strategy underlying phenomenological research entails that the change, and beliefs concerning the means to achieve it, are reconstructed *ex post* from observation of the behaviour of the agents and as premises consistent with that behaviour and corresponding to it. If instead change (the solution of a concrete problem) is the phenomenon observed, the orientation to the strategy in question entails that the change is justified *a posteriori* or during the observation through the re-construction of agents' intentions, and beliefs about the means to fulfil them, that are consistent with and corresponding to the change observed.

These considerations are not intended to suggest that, in action research oriented to the strategy underlying phenomenological research, the activity of reflection cannot be 'connected' with a change. In fact, as it has been pointed out [Maggi 2003, chapter III.2; Albano, forthcoming], by virtue of the interpretation of what has happened, people can acquire greater awareness of the system of action and power relations in which they are embedded. They can also develop new intentions, desires, motives, reasons for action, and new beliefs concerning the means

required to realize them; and this may also be followed by a change in the action system made by the actors in order to serve their own interests.

These considerations highlight that, due to the presupposition on which is based understanding of the meaning of action on the basis of the sense given to it by the actors, action research consistently oriented to this strategy is unable to offer any prior indications concerning the means required to achieve change (or to solve a concrete problem) when this is regarded as the purpose or the intention of the actors. Nor is it able to offer prior indications concerning the change (or the solution of a concrete problem) when this is regarded as the means to realize other intentions of the agents. We believe that this aspect should be emphasised, because Liberman's [2009] article might be taken to suggest the reverse, especially in the passage arguing that only when use is made of the strategy underlying phenomenological research can the researcher offer suggestions pertinent to the real problems that agents have to face in the situation studied.

In this section we have discussed the implications of an orientation of action research to the strategy underlying phenomenological research, starting with the elucidation of that strategy's presupposition. To this end, we have concentrated on its logical structure, drawing on von Wright [1971]. Although this is not the only possible approach, we nevertheless believe that it helps give full intelligibility to both the possibilities offered by an orientation of action research to the strategy in question and those precluded. In other words, we believe that this makes it possible to clarify, in relation to action research, the consequences of exploiting the possibilities offered by this strategy in terms of the loss of other possibilities. In regard to this aspect, the reflection conducted and its implications are primarily addressed to the operators that have to, or desire to, choose an approach to action research. In developing them, we have considered the approach to action research as a form of meaningful human action, and we have sought to adopt the perspective indicated by Weber [1904], who, in conclusion, we would like to quote briefly: "All thoughtful reflection on the ultimate elements of meaningful human action is primarily tied to the categories of 'end' and 'means'. We want something concretely either 'for its own sake' or as a means for

achieving something else which is more highly desired. The suitability of the means to given ends is the prime question accessible to scientific consideration. [...] Taking into account the bounds of our knowledge, if the conditions for attaining a given end seem to be present, we can determine the consequences of the application of the requisite means besides the attainment of the intended end [...]. In this way we offer to the actor the possibility [...] to answer the question: what does attainment of the desired end 'cost' in the context of loss […] of other values? [...] No person behaving reflectively and responsibility can avoid this balancing of the ends of an action against its consequences; and one of the most important functions of the technical criticism considered so far is to provide for this. Turning an assessment of this kind into a decision is certainly not the business of science, but of the desiring person [...]. In the making of such a decision we can further offer knowledge of the significance of what is wished for. We can elucidate the desired ends between which he chooses according to context and significance, first of all by indicating and developing in a logically consistent manner the 'ideas' that do, or can, underlie the concrete end [...] considered in their content and in their ultimate axioms, as well as in the consequences that logically and practically they derive from their realization. [...] Whether these ultimate standards [axioms] should be acknowledged by the […] subject is his own affair, a question of his desire and conscience, and his personal view of the world".

3.3. The historical evolution and the geographical expansion of the practice of producing information systems for organizations

This section argues that when a practice extends across space and time, it requires the renewal of the analytical categories necessary for its understanding. This thesis will be illustrated by surveying the papers given at the Alpis session on social studies concerning information systems. It will use the concepts proposed by Kenneth Liberman's phenomenological treatment of situated studies, starting from the thought of Martin Heidegger. Enumeration will be made of the concepts proposed by the

phenomenological approach as derived from situated studies [Suchman 1987], with discussion of its applicability in the current context of practices for the design of information systems, a domain in which situated studies have been successfully applied. It will be asked whether the extension in space and time of design practices, the fact that they result from intricate international dynamics distributed among a multiplicity of actors – with the consequent change in design methods due to the greater processing capacity and memory of computers, as well as to their ubiquity – make a difference with respect to the categories used by phenomenology and the situated studies approach to understand the limitations of the design of information systems as "formal analysis" [Liberman 2009, p.11]. Then it will be proposed that the conceptual and methodological categories thet emerged from the Alpis session on social studie sof technological markets are as better suited to understand software production as a comtemporary and post-local social phenomenon.

The solutions to the problem of the unpredictability of the events perceived by the designers of Xerox photocopiers in the 1980s, of which Liberman speaks in his ALPIS paper with reference to Suchman [1987], have evolved over time. The current solution seems no longer to be that of incorporating "more and more sophisticated plans" [Ciborra 2006; see Suchman 1987] into expert systems. In 2009 the design of information systems appears to be the business of large multinational companies which have evolved their technological products over decades of experience in relationships with users. The designer is no longer a single individual relying on formal calculations to anticipate the possible uses of a system. Perhaps because design firms are aware of the reflexivity of our understanding, and because of their phenomenological awareness that the "describing is the constituting" [Liberman, p.4], they realize that the more formal analysis is used to investigate a situation, the more that situation changes – and they seem to apply this principle knowingly and competently. In this regard, the business information systems of the multinational companies dealing in management software increasingly take the form of standard pre-packaged products. Such products embody the ways in which tasks are structured by the 'average' of clients in each of the production sectors for which

the supplier offers products. The pre-packaged product does not claim to match local uses. Rather, it offers guarantees concerning a series of other advantages. Because it is a standard product, unless major changes are made to it by the user, it can be reliably maintained on-line by the manufacturing firm. Moreover, the supplier establishes partnerships with a series of local subcontractors, to which it cedes the flourishing market of system 'personalizations' and management of the problem of the unpredictability of events in regard to the personalized versions of the system.

During the Alpis session of social studies on technological markets, various papers proposed concepts for a social analysis able to keep abreast with the evolution of technological markets and the consequent evolution of what is meant by developing an information system for organization. In this regard, the paper by Neil Pollock [Pollock 2009] considered how consultants classify and organize emerging technology markets. It showed that when a specific type of consultant – the industrial analyst – discusses the emergence of a new technology they also define the state of the technological industry and its future development. Pollock's paper focused on the process of categorization applied by industrial analysts and on the variety of terms used to differentiate among very similar artifacts. Instead of perceiving nomination solely as a cognitive limitation – a form which in referring to Heidegger can be called 'concealment' in the organization of the intelligibility of the artifact software in its organizational use – Pollock shows how these partial categories are deliberately used by industrial analysts both to order (and to represent) the technological market, to give it form and to generate effects on other actors, such as software companies and users. The socio-political procedure of the intermediaries in what Pollock calls the "technological field" [Pollock 2009, p. ...] cannot be related to the formal and analytical accounts of rational choice theorists in sociology and political science, and it cannot be described solely in terms of the cognitive performance of a single individual. Just as the Oregon State Highway Department of which Liberman speaks was aware of the limitedness of its planning model, and consequently implemented all ideas concerning road signage systems on a trial basis before their definitive use ["put on the back-burner", Liberman, p.5], so

the multinational companies that today produce the information systems used throughout the world by organizations and their members (IBM, SAP, Oracle, Microsoft, etc.) proceed according to a cognitive paradigm more distant than can be imagined from Isaac Newton's deductive process.

The operations of multinational companies in the production of software stand in relation to the deductive process and the planning model of the expert systems designer in the same way as the 'big sciences' stand in relation to the 'small sciences' described by Harris [1998]. By comparing the mappings of all the constituent parts of the scientific knowledge projects at the beginnings of modern science with those of the age of geographical discoveries, Harris shows how the development and initial use of the astronomical telescope and pneumatic equipment were 'small enterprises', because their construction required the labour of a few people for a brief period of time in a restricted geographical context. By contrast, in the mapping of South America, the assembly of a cabinet of curiosities and the construction of a taxonomy of quadrupeds were 'big enterprises' because they required long-term labour by a large number of people distributed across a broad geographical area [James Harris 1998, pp. 275-6]. We propose here that the status of big science should also be assigned to software production.

On investigating what principle of jurisdiction governs the actors working within the 'big enterprises' of software production in technology markets, Antonios Kaniadikis introduces the notion of the "Agora of techno-organizational change" in his Alpis paper. This expression refers to the emergence and expansion in the global context of a market for the resources necessary to undertake technological change in businesses. These resources comprise technologies like information systems and software packages, technical and managerial expertise, methodologies for the management of change, project management skills, and others besides. The Agora of techno-organizational change is populated by heterogeneous actors (suppliers, users, intermediaries, consultants, analysts, states, professional associations, and so on) actors with conflicting (or otherwise) interests and diverse points of view.

The uncertainty and confusion of industrial practices reflect a similar situation in academic research. The interdisciplinary study of technological and organizational innovation appears fragmented and unable to grasp analytically and explore in integrated manner the emergence and taking shape of a global market for techno-organizational change. In particular, although a recent focus by situated studies on the phase of technological implementation – which has come about in opposition to technocratic analysis – is informative, it has created an analytical gap which leaves the broader context of socio-economic relationships unexplored. Campagnolo, in his paper given at Alpis [Campagnolo 2009], talked in this regard about how the methods of social researchers (and in particular the research design with which they conduct fieldwork) reflexively gives shape to the analysis. Designing research on a technology's implementation which concentrates exclusively on the context of the client organization, and only during the period in which the researcher has access to the field, will necessarily emphasise the local aspects of work practices in the user organization as being different from those supported by the technological supply. It is a different matter how the supplier organization can respond to the variety of requests made by users notwithstanding the idiosyncrasy of each organizational context, so that interest shifts from the importing of organizational solutions to an interest in their exporting. Social analysis of this context requires methodologies which consider a broader space-time horizon. Quoting George Marcus, Campagnolo suggests multi-sited ethnography as one of these possible methodologies with which to construct the field: "Words, objects and identities take their meaning through their circulation in diffused time-space [...]. Tracing cultural formations becomes a mobile activity" [Marcus 1995, p.96].

To resume the flow of Kenneth Liberman's reflections, we must now return whence we began: the theme of formal analysis and the fact that, as Liberman says, "understanding is rarely the deductive process that Isaac Newton would want to talk about". To what type of practice today corresponds what Heidegger called "direct seeking"? It is true that the Dasein (the being-there) is always present in a situation before analytical reflection begins, and that the Dasein is found "in a finding which arises not so

much from a direct seeking". But what can we say about the fact that the direct seeking has evolved from the expert systems of the 1980s into the database analytics of the present day. And how we can quantify that 'so much' of the finding that arises from the direct seeking? In short, can we postulate that the Dasein is to some extent reflexively influenced by the technologies of direct seeking? According to Jannis Kallinikos the answer is 'yes'. Formal analysis [or the database analytics of which Kallinikos spoke in his paper at Alpis 2009] appears limited only if it is distinguished from the non-rational, only if it is attributed a status of objectivity separate from the subjective status given to other epistemological positions. Kallinikos instead attributes to formal analysis the "tyranny of perpetual remembering" which overwhelms the evolutionary role and significance that forgetting has had in personal and cultural development. Moreover, a mass of data accumulated by the storage and processing power of computer memories is always addressed to the past. It thus favours the maintenance of what has happened rather than what might have happened: all the near misses, dreams and imaginings that are not captured in databases but which nevertheless influence our perceptions just as much as reality does. In this regard, Maniatopoulos [2009], drawing on the social theory of Castoriadis [1987], addresses the relationships among the rational, perceptual and imaginary components of signification in the context of technology choice. Maniatopoulos proposes Castoriadis's theory as a resource for the analysis of the complex nature of technology choice and its relationship with institutional desires, fantasies and imaginary practices. The acquisition of certain technologies by organizations can simultaneously furnish evidence of membership in certain social groups, indicate significant relationships, and incorporate the imaginary corresponding to the professionalism with which that organization wants to represent itself.

In this brief exploration of social studies on technology markets viewed through a phenomenological lens we have sought to enumerate some critical aspects of the phenomenological research tools employed to understand contemporary practices of information systems development. Firstly, by referring to a comparison between two techniques (that of planning model and

that of database analytics) we have asked the following question: what is the impact exerted by technological change on the epistemological categories used by Heideggerian phenomenology to describe formal analysis and cybernetics? We have answered this question by describing certain aspects of technology design, not as individual practice but as embedded in an evolving global market. Then, with reference to Pollock's paper, we have read the practices of industrial analysts by proposing Heidegger's concept of concealment as intentional and relational rather than as individual/ontological. We have subsequently described software development and its markets as 'big science', arguing, with reference to Kaniadakis's notion of the "agora of the techno-organizational change", that a change of scale in a practice must necessarily be followed by the devising of new analytical categories for its understanding. Thirdly, we have addressed a problem of method: how can practices distributed in space and time be studied without the research design reflexively influencing the results obtained? We have proposed multi-sited ethnography as a practice that interprets this movement of methodological criticism

+. Finally, with reference to a comparison between the planning model of expert systems which Suchman discusses and the database analytics described by Ayres, we have suggested that formal analysis restricts the possibility of understanding reality by acting performatively on it, extending the dimension of perpetual memory to the detriment of identifying the role of imaginary signification in definition of the organizational identity that also takes shape through technology choice.

REFERENCES

Adorno, T. W.
1990   *Negative Dialectics,* E. B. Ashton,Trans., Routledge..

Albano, R.
2009   *La ricerca intervento nell'organizzazione*, in T.M. Fabbri (a cura di), *Organizzare: concetti e metodi*, Roma, Carocci (in corso di pubblicazione).

Avison, D. E. and Fitzgerald, G.
1995   *Information Systems Development: Methodologies, Techniques and Tools*: UK limited, McGraw-Hill International.

Batini, C., De Petra, G., Lenzerini, M. and Santucci, G.
2008   *La progettazione concettuale dei dati.* Milano, Franco Angeli.

Bonzanini, A. e De Masi, D.
1984   *Storia, metodologia e tecniche della ricerca empirica in sociologia del lavoro e dell'organizzazione*, in D. De Masi e A. Bonzanini (a cura di), *Trattato di sociologia del lavoro e dell'organizzazione. La ricerca.* Milano, Franco Angeli.

Bourdieu, P.
1992   *Invitation to a Reflexive Sociology.* Chicago, University of Chicago Press.

Bowker, G. and Star, S. L.
1999   *Sorting Things Out: Classification and Its Consequences,* Cambridge, MA, MIT Press.

Braccini, A.M., F. T.
2009   *Knowledge Sharing in a Cultural Heritage Context: An Exploratory Study.* Proceedings of ALPIS2009 9 (14), «Sprouts: Working Papers on Information Systems».

Bratteteig, T.
2009   *On the Preconditions for Intervention in Systems Design.* Proceedings of ALPIS, Italy. «Sprouts: Working Papers on Information Systems», 9 (19).

Buckingham, R. A., Hirschheim, R. A., Land, F. F. and Tully, C. J.
1987   Information systems curriculum: a basis for course design. In R. A. Buckingham, R. A. Hirschheim, F. F. Land & C. J. Tully (eds.), *Information Systems Education: Reccomendations and Implementation* Cambridge, CUP.

Campagnolo, G.M.
2009   *The Working Lifeworld of Situated Subjects and the World System of Software Maintenance: Destabilizing a Distinction.* Proceedings of ALPIS, Italy. «Sprouts: Working Papers on Information Systems», 9 (2).

Ciborra, C.
2002   *The Labyrinths of Information - Challenging the Wisdom of Systems*: Oxford University Press.
2006   *The mind or the heart? it depends on the (definition of) situation.* «Journal of Information Technology», 21, pp. 129–139.

D'Atri, A., Spagnoletti, P., Banzato, A., Bonelli, C., D'Atri, E., Traversi, V. and Zenobi, P.
2009   *Supply Chain and Virtual Enterprises: the Beer Game evolution.* Proceedings of ALPIS2009, 9 (13), «Sprouts: Working Papers on Information Systems».

De Michelis, G.
2008   *The phenomenological stance of the designer*, in T. Binder, J. Loewgren, L. Marlborg (eds.) (*Re-)searching the Digital Bauhaus.* Berlin, Springer, pp. 145-162.

Dourish, P.
2001   *Where the Action is: The Foundations of Embodied Interaction.* MIT/Triliteral.

Dreyfus, H. L.
1990   *Being-in-the-world*: *A Commentary on Heidegger's Being and Time, Division I.* MIT Press.
1995   *Heidegger on Gaining a Free Relation to Technology.* in Andrew Feenberg and Alastair Hannay (eds.), *Technology and the Politics of Knowledge*, Indiana University Press, 1995, pp. 97-107.

Fele, G.
2008   *In praise of thin descriptions: ethnography, ethnomethodology and the study of practice.* Paper presented to Alpis Ski Seminar '08 - Alpine Information Systems Seminar - 4th edition, Carisolo, Italy, February 8-13, 2008.

Fele, G.

2009 *Why Is Information System Design Interested in Ethnography? Sketches of an ongoing story.* «Etnografia e Ricerca Qualitativa», 2, 1, pp. 49-76.

Foucault, M.

1966 *Les Mots et les Choses.* Paris, Gallimard.

1975 *Surveiller et punir: naissance de la prison.* Paris, Gallimard.

Garfinkel, H.

2002 *Ethnomethodology's Program: Working Out Durkheim's Aphorism.* Lanham, MD, Rowman & Littlefield Publishers.

Gibson, J. J.

1979 *The Ecological Approach to Visual Perception.* Boston, Houghton Mifflin.

Giddens, A.

1984 *The Constitution of Society: Outline of the Theory of Structure.* Berkeley, CA, University of California Press.

Gilli, G. A.

1971 *Come si fa ricerca. Guida alla ricerca sociale per non specialisti.* Milano, Mondadori.

Harris, S.

1998 *Long-Distance Corporations, Big Sciences, and the Geography of Knowledge,* in «Configurations», 6, 2, pp. 269-304.

Heidegger, M.

2006 *Essere e Tempo*, in A. Marini (ed.). Milano, Arnoldo Mondadori Editore.

Hempel, C.

1966 *Philosophy of Natural Science.* Prentice Hall, New Jersey, Englewood Clifs.

Hermann, T.

2009 *"The Socio-Technical Walkthrough (STWT): A Means of Research-Oriented Intervention into Organizations".* Proceedings of ALPIS, Italy. «Sprouts: Working Papers on Information Systems», 9 (18).

Hobbes, T.

1640 *De Corpore* (A. P. Martinich, Trans.). New York, Abaris Books, 1981.

1651 *Leviathan, with selected variants from the Latin edition of 1668* (E. Curley ed.). Indianapolis, Hackett, 1994.

Hobbes, T.

1655 *The Elements of Law, Natural and Politic,* J.C.A. Gaskin ed., Oxford, Oxford University Press, 1990.

Hughes, E. C.

1970 *The Sociological Eye.* Chicago, Aldine.

Husserl, E.

1970 *The Crisis of the European Sciences, and Transcendental Phenomenology:* Evanston, IL.: Northwestern University Press.

Kallinikos, J.

2009 *On Shadows and Ghosts: Constructing Life out of Digital Records,* Proceedings of ALPIS, Italy. «Sprouts: Working Papers on Information Systems», 9 (6).

Kaniadakis, A.

2009 *Structuring the Agora of Techno-Organisational Change.* Proceedings of ALPIS, Italy. «Sprouts: Working Papers on Information Systems», 9 (12).

Kern, R., Zirpins, C. and Agarwal, S.

2009 *Managing Quality of Human-Based Services.* Proceedings of ALPIS2009, «Sprouts: Working Papers on Information Systems».

Levinas, E.

1979 *Totality and Infinity.* Tha Hague: Martinus Nijhof.

Lewin, K.

1946 *Action research and minority problems*, in «Journal of Social Issues», vol. 2, n. 4, pp. 34- 46.

Liberman, K.

1985 *Understanding Interaction in Central Australia: An Ethnomethodology of Australian Aboriginal People.* London, Routledge.

2004 *Dialectical Practice in Tibetan Philosophical Culture: An Ethnomethodological Inquiry Into Formal Reasoning.* Lanham, Maryland, Rowman & Littlefield.

2007 *Husserl's criticism of reason - with ethnomethodological specifications.* Lanham, Lexington Books.

Locke, J.

1690 *An Essay Concerning Human Understanding,* Oxford University Press, 2009.

Maggi, B.

2003   *De l'agir organisationnel. Un point de vue sur le travail, le bien-
        être, l'apprentissage.* Toulouse, Octarès Éditions.

Maniatopoulos, G.

2009   *The Constitution of Technology Choice,* Proceedings of ALPIS,
        Italy. «Sprouts: Working Papers on Information Systems»,
        9 (11).

Marcus, G.

1995   *Ethnography in/of the World System: The Emergence of Multi-
        Sited Ethnography,* in «Annual Review of Anthropology»,
        24, pp. 95-117.

Mearleau-Ponty, M.

1964   *Le visible et l'invisible.* Paris, Gallimard (trad. eng. *Visible and
        the Invisible,* Evanston, Illinois, Northwestern University
        Press.

Mill, J. S.

1843   *A System of Logic, Ratiocinative and Inductive*: General Books
        LLC, 2009.

Odello, G.

2007   *Espresso Italiano Tasting,* Brescia, Centro Studi Assaggiatori.

Orlikowski, W.

1992   *The Duality of Technology: Rethinking the Concept of Technology*
        in «Organizations. Organization Science»*,* 3 (3), pp. 398-
        427.

Pollock, N.

2009   *Constructing Technology Markets: How Industry Analysts
        Organise Technological Fields.* Proceedings of ALPIS, Italy
        .«Sprouts: Working Papers on Information Systems», 9
        (10).

Rabinow, P.

2008   *Pensare cose umane.* Roma, Meltemi editore.

Schmidt, K.

1997   *Of maps and scripts - the status of formal constructs in cooperative
        work.* Paper presented at the Proceedings of the
        international   ACM   SIGGROUP   conference   on
        Supporting group work: the integration challenge,
        Phoenix (AZ).

Sini, C.

1997   *Teoria e Pratica del Foglio-Mondo.* Roma-Bari, Laterza.

Star, S. L. and Griesemer, J. R.

1989   *Institutional Ecology, 'Translations' and Boundary Objects: Amateurs and Professionals in Berkeley's Museum of Vertebrate Zoology, 1907-39*. «Social Studies of Science», 19, pp.387-420.

Suchman, L.

1987   *Plans and Situated Actions: The Problem of Human-Machine Communication*. Cambridge, Cambridge University Press.

Suchman, L.

1987   *Plans and Situated Actions: The Problem of Human-Machine Communication*. Cambridge, Cambridge University Press.

Viscusi, G.

2009   *The eGovQual Methodology: Information Systems Planning as Research Intervention* Proceedings of ALPIS2009, 9 (15), «Sprouts: Working Papers on Information Systems», 9 (15).

von Wright, G. H.

1971   *Explanation and Understanding*. London, Routledge & Kegan Paul.

Wagner, I., Basile, M., Ehrenstrasser, L., Maquil, V., Terrin, J.J.and Wagner, M.

2009   *Supporting the Formation of Communities of Practice: Urban Planning in the MR-Tent*. Proceedings of ALPIS, Italy. «Sprouts: Working Papers on Information Systems», 9 (17).

Weber, M.

1904   *Die "Objektivität" sozial-wissenschaftlicher und sozialpolitischer Erkenntnis,* in Gesammelte Aufsätze zur Wissenschafts-lehre, Mohr, Tubingen, 1922 (English translation in Max Weber, *The Methodology of the Social Sciences,* trans. and ed. By Edward A. Shils and Henry A. Finch, New York, Free Press, 1949).

Winograd, T.

1995   *Heidegger and the Design of Computer Systems*, in Andrew Feenberg and Alastair Hannay (eds.), *Technology and the Politics of Knowledge*, Indiana University Press, 1995, 108-127.

Winograd, T. and Flores, F.
1987   *Understanding Computers and Cognition: A New Foundation for Design.* New York, Addison-Wesley.

I Quaderni del Dipartimento di Sociologia e Ricerca Sociale costituiscono una iniziativa editoriale finalizzata alla diffusione in ambito universitario di *materiale di ricerca, riflessioni teoriche e resoconti* di seminari di studio di particolare rilevanza. L'accettazione dei diversi contributi è subordinata all'approvazione di un'apposita Commissione scientifica.

Dal 2006 la collana comprende una sezione (serie rossa) dedicata ai contributi di giovani ricercatori e dal 2007 una serie verde riservata ai docenti e ricercatori ospiti del Dipartimento.

1   E. BAUMGARTNER, *L'identità nel cambiamento,* 1983.

2   C. SARACENO, *Changing the Gender Structure of Family Organization,* 1984.

3   G. SARCHIELLI, M. DEPOLO e G. AVEZZU', *Rappresentazioni del lavoro e identità sociale in un gruppo di lavoratori irregolari,* 1984.

4   S. GHERARDI, A. STRATI (a cura di), *Sviluppo e declino. La dimensione temporale nello studio delle organizzazioni,* 1984.

5/6   A. STRATI (a cura di), *The Symbolics of Skill,* 1985.

7   G. CHIARI, *Guida bibliografica alle tecniche di ricerca sociale,* 1986.

8   M. DEPOLO, R. FASOL, F. FRACCAROLI, G. SARCHIELLI, *L'azione negoziale,* 1986.

9   C. SARACENO, *Corso della vita e approccio biografico,* 1986.

10   R. PORRO (a cura di), *Le comunicazioni di massa,* 1987.

11/12   G. CHIARI, P. PERI, *I modelli log-lineari nella ricerca sociologica,* 1987.

13   S. GHERARDI, B. TURNER, *Real Men Don't Collect Soft Data,* 1987.

14   D. LA VALLE, *Utilitarismo e teoria sociale: verso più efficaci indicatori del benessere,* 1988.

15   M. BIANCHI, R. FASOL, *Il sistema dei servizi in Italia. Parte prima: Servizi sanitari e cultura del cambiamento. A dieci anni dalla riforma sanitaria. Parte seconda: Modelli di analisi e filoni di ricerca.* 1988.

16   B. GRANCELLI, *Le dita invisibili della mano visibile. Mercati, gerarchie e clan nella crisi dell'economia di comando,* 1990.

17   M. A. SCHADEE, A. SCHIZZEROTTO, *Social Mobility of Men and Women in Contemporary Italy,* 1990.

18   J. ECHEVERRIA, *I rapporti tra stato, società ed economia in America Latina,* 1991.

19   D. LA VALLE, *La società della scelta. Effetti del mutamento sociale sull'economia e la politica,* 1991.

20   A. MELUCCI, *L'Aids come costruzione sociale,* 1992.

21   S. GHERARDI, A. STRATI (a cura di), *Processi cognitivi dell'agire organizzativo: strumenti di analisi,* 1994.

22   E. SCHNABL, *Maschile e femminile. Immagini della differenza sessuale in una ricerca tra i giovani,* 1994.

23   D. LA VALLE, *La considerazione come strumento di regolazione sociale,* 1995.

24   S. GHERARDI, R. HOLTI e D. NICOLINI, *When Technological Innovation is not Enough. Understanding the Take up of Advanced Energy Technology,* 1999.

25   D. DANNA, *Cattivi costumi: le politiche sulla prostituzione nell'Unione Europea negli anni Novanta*, 2001.

26   F. BERNARDI, T. POGGIO, *Home-ownership and Social Inequality in Italy*, 2002.

27   B. GRANCELLI, *I metodi della comparazione: Alcuni area studies e una rilettura del dibattito*, 2002.

28   M.L. ZANIER, *Identità politica e immagine dell'immigrazione straniera, una ricerca tra gli elettori e i militanti di An e Ds a Bologna*, 2002.

29   D. NICOLINI, A. BRUNI, R. FASOL, *Telemedicina: Una rassegna bibliografica introduttiva*, 2003.

30   G. CHIARI, *Cooperative Learning in Italian School: Learning and Democracy*, 2003.

31   M. ALBERTINI, *Who Were and Who are the poorest and the richest people in Italy. The changing household's characteristics of the people at the bottom and at the top of the income distribution*, 2004.

32   D. TOSINI, *Capitale sociale: problemi di costruzione di una teoria*, 2005.

33   A. COSSU, *The Commemoration of Traumatic Events: Expiation, Elevation and Reconciliation in the Remaking of the Italian Resistance*, 2006 (serie rossa).

34   A. COBALTI, *Globalizzazione e istruzione nella Sociologia dell' Educazione in Italia*, 2006 (serie blu).

35   L. BELTRAME, *Realtà e retorica del brain drain in Italia. Stime statistiche, definizioni pubbliche e interventi politici*, 2007 (serie rossa).

36   A. ARVIDSSON, *The Logic of the Brand*, 2007 (serie verde).

37   G. M. CAMPAGNOLO, *A sociology of the translation of ERP systems to financial reporting*, 2007 (serie rossa).

38   LABOR - P. CAPUANA, E. LONER, C. PATERNOLLI, T. POGGIO, C. SANTINELLO, G. VIVIANI, *Le ricerche di Petronilla. Una guida alle fonti statistiche per l'analisi secondaria nella ricerca sociale*, 2007 (serie blu).

39   A. SCAGLIA, *25anni dell'Associazione di Sociologia. Materiali per scriverne la storia*, 2007 (serie blu).

40   A. M. BRIGHENTI, *Tra onore e dignità. Per una Sociologia del rispetto*, 2008 (serie rossa).

41   S. BENATI, G. CHIARI, *I meccanismi dell'apprendimento cooperativo: un approccio di scelta razionale*, 2008 (serie blu).

42   A. COBALTI, *L'istruzione in Africa*, 2008 (serie blu).

43   P. WAGNER, *The future of Sociology: understanding the transformations of the social*, 2009 (serie blu).

44   A. COBALTI, *L'istruzione in America latina*, 2009 (serie blu).

45   P. BARBIERI, G. CUTULI, *Equal job, unequal pay. Fixed term contracts and wage differentials in the Italian labor market*, 2009 (serie blu).

Phenomenology and the Social Study of Information Systems: Conversations with Kenneth Liberman

Kenneth Liberman with Giolo Fele, Vincenzo D'Andrea,
Gian Marco Campagnolo, Ylenia Curzi, Gianluigi Viscusi

Liberman invites us to explore the depths of our ordinary social world, the primitive place of our experience. As an anthropologist who spent two years with some Australian Aboriginal tribes and three years in a Tibetan monastery, he encourages us to reflect on that world taken for granted that we call reality. Similarly, as philosopher, he sees the limits of reason and the difficulties we fall into when we overconceptualize our worldly relations, when we entrust entirely to what he calls "the formal analysis", when we don't recognize the very carnal, practical and experiential character of social life. Starting from this basis, the paper offers grounds for reflection on the field of information systems.

Kenneth Liberman is Professor of Sociology at the University of Oregon. An ethnomethodologist and social phenomenologist, he has researched the practices of reasoning of Tibetan scholar-monks *Dialectical Practices in Tibetan Philosophical Culture*, Rowman & Littlefield. His most recent book is *Husserl's Criticism of Reason*, With Ethnomethodological Specifications, Lexington Books.

Giolo Fele is Professor in Sociology of Communication at the Faculty of Sociology, University of Trento.

Vincenzo D'Andrea is Associate Professor at the University of Trento, where he teaches Information Systems at School of Sociology.

Gian Marco Campagnolo is post-doc fellow at the Department of Sociology and Social Research of the University of Trento.

Ylenia Curzi is post-doc fellow at the Department of Business Administration of the Faculty of Economics of the University of Modena and Reggio Emilia.

Gianluigi Viscusi is currently holding a post-doc position at the Department of Informatics, Systems and Communication (DISCo) of the University of Milano-Bicocca.