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Social	brokers:	looking	for ne	w pla	ayers	to su	ıpport
	both e-s	ervices a	and e-1	partic	cipati	on	

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Chapter 1

Introduction

This research study is composed by three main parts. The first part (Chapter 2 and Chapter 3) is dedicated to the foundations of social research (ontology and epistemology) with the intention emphasize the role of ontology as instrument for throwing new light on what is object of investigation. Particularly, it is supposed that further work is required in order to see if new perspectives of reality will be beneficial to the status of social research. In this regard, it has been suggested a research strategy that try to look upon the role of the stream of life as a factor for enriching the understanding of a specific object of research. This research strategy will be applied for investigating two e-participation projects (see Chapter 7).

The second chapter continuous the discourse on theoretical approaches to research activity and particularly turned to a cognitive approach and to a phenomenological approach. The objective, here, is to see how these two different perspectives succeed to investigate both technology in general and information technology in particular. Suggestions for IT design have been drawn on the basis of this analysis.

After the introductory part in which it has been dealt with the foundations of social research and the study of technology and mainly information technology, let's move to the core of the present work (second part). The concept of social broker (Chapter 4) has been introduced and, in order to examine it more in detail, the concept of access point (Giddens, 1990), trust spreaders (Mutti, 1998), trustworthy clues (Bacharach and Gambetta, 2001), and institutional carriers (Scott, 2001) have been taken into consideration. These series of concepts seem able to address the question to map civil society networks. This mapping is based on node identification that constitutes a point of reference (local branches of political parties or trade unions but also in cultural, voluntary, trade associations, sport clubs, charities, and parishes) for citizens and in this way an apt solution for introducing and spreading both e-participation and e-services applications. The case of telecentres in Latin America and Asia are seen as examples in this regard and it arouses the question if developing countries can be also an example to follow with interest.

The third part focuses, at first (Chapter 5), on e-filing systems in three Italian public bodies (The Tax Agency, the National Institute of Social Insurance and the Chambers of Commerce). These cases gave the opportunity to examine the role of social brokers for supporting the diffusion of electronic means.

Data collected shows, rather clearly, that the large part of electronic submissions of tax returns to the Tax Agency or balance sheet to Chambers of Commerce are not performed directly by citizens and companies by intermediaries that share the characteristics of social brokers. On the other, citizens and companies do not tend to use these systems autonomously.

It is presumed that, for they inherent characteristics, social brokers can be beneficial for the development of e-participation as well. In this proposal, chapter 6 has been dedicated to questioning participation and through which modalities it has been experienced after the advent of current democracies. All of this leads to the final chapter in which two e-participation projects have been examined. Differently from the public bodies cases, here, social brokers do not play a relevant role and the use of these electronic applications are promoted addressing directly citizens. These experiments showed positive aspects as far as it concerned interventions elaborated on issues at stake. Nevertheless, data related to use rate shows rather clearly an unsatisfactory level of participation.

Conclusions suggest that turning to social brokers as entities for mediating between citizens and public administrations can be beneficial for the development both of participation and e-participation.

Chapter 2

The role of ontology in social research

Research activity is epitomized by two concepts: epistemology and ontology. Ontology is the study of being (Crotty, 1998), of what exists and of what is think-able. It determines what types of entities constitute reality. Ontology questions the real nature of entities, how do they come into being and why.

Epistemology refers to how we know what we know. Therefore, rather than focusing on the object of the investigation, it concentrates on how knowledge can be acquired on the entities being examined. This means that epistemology has to do with methods: theories, concepts, rules and the procedures applied within a discipline in order to derive at knowledge.

Research activity, at least in the realm of social science, tends to concentrate on epistemology rather than ontology. Every research paper dedicates a portion of it to epistemology. Conversely, ontology is often neglected or considered tacitly. From this perspective, Crotty (1998) in his book on social research, assigns a marginal role to ontology, he sees social research activity mainly being funded on

epistemology, theoretical perspectives, methodologies and methods. The fact that in disciplines such as organization theory and information systems ontology is overlooked does not mean that it is irrelevant (Smith, 2006).

The objective of this paper is not to give a detailed discussion on complicated and sophisticated concepts such as epistemology and ontology but to throw light on the role of ontology in research activity. In order to achieve this objective two approaches will be taken as points of reference: the perspective of critical realism, a philosophical approach to the social and natural world, and in particular Bhaskar's work (1998), and the perspective of 'social constructionism' (Crotty, 1998) and in particular the work of Berger and Luckmann (1966).

The former holds that existence can be subdivided into 'intransitive' and 'transitive' objects of knowledge (Bhaskar, 1998). 'Intransitive' objects constitute what exists in spite of consciousness exercised by human beings. "The tides would still turn and metals conduct electricity in the way they do, without a Newton or a Drude to produce our knowledge of them (Bhaskar, 1998 pp. 17)". 'Transitive objects' are the product of sciences: namely, theories and paradigms that are used to interpret reality. This distinction leads to the fact that "the world should not be conflated with our experience of it" (Sayer, 2000 pp. 11) and, further, prevents the so-called 'epistemic fallacy' (Bhaskar, 1998). 'Epistemic fallacy' refers to epistemology and specifically it is important to be aware that there is a distinction between what exists and the knowledge available of these phenomena due to scientific research for example. The separation of these two realms (being and knowledge of being) leads us to have an implicit concept of the world based on knowledge produced through epistemology. From this perspective, critical realism underlines the prominence of ontology. For example, there are instances where the prominence of knowledge about something rather than on the 'something'. That is to say, there is a tendency to emphasize what we know about and not the object of knowing.

The question of what exists and the knowledge of existence has been the object of study even within 'social constructionism' (Crotty, 1998). Berger and Luckmann's work (1966) maintains that social reality is perceived by individuals as an interrupted series of 'typifications'. When we relate to each other, we tend to typify our neighbour according to specific characteristics. Only in intimate face to face situations do such 'typification' vanish and anonymity loses its significance. Otherwise, we refer to postmen, professors, friends, clients, etc. as objects of specific patterns of interaction. From this perspective, social structures are intended as the sum of 'typifications' and of recurring patterns of interaction.

Another aspect of this discourse is related to language: the means whereby interactions take place with others. Language can be conceived within a predefined framework and as such it shapes individuals expression of subjectivity. This means that individuals' biographical experiences are subject to language structure and to an anonymization process as they are classified into general categories that have meaning for everyone.

Turning back to the question of what exists and the knowledge of existence, 'typifications' and language contribute to outline a scenario in which only limited knowledge of social reality is available. Knowledge enlightens only an area in an obscure background that constitutes reality. Knowledge is a path in the forest where it is possible to see ahead and sideways but the rest is in darkness.

Several pieces of research have been instrumental in addressing the dark side at least in the organization theory and information systems discipline. The popularity of knowledge management is due, to a large extent, to the concept of tacit knowledge (Polany, 1966) that has highlighted a specific aspect of knowledge of human beings. The concept of 'ba' (Nishida, 1921, 1930) can be seen in the same perspective outlining a time-space nexus for favouring emerging relationships among individuals in order to create knowledge (Nonaka, Konno, Toyama, 2001). Turning to the information systems discipline rather than organization theory, Ciborra, in the methodological appendix of "The labyrinths of information" (2002), explains that he has focused his research activity on 'apparitions' (surprises and drifting phenomena, bricolage and improvisation) rather than on 'appearances' (a set of ideas and models popular in a business field).

The objective of this paper is to pursue this perspective focusing on Heidegger's work on the phenomenology of religious life (2004). Moreover, in the field of organization theory and information systems, the methodology introduced in Heidegger's naive effort has been adopted by Ciborra (2005; 2006) in his most recent work. This is the background for a tentative attempt to throw new light on the role of ontology in social research studies.

This distinction requires further investigation. Both 'apparitions' and 'appearances' arise from the same phenomenon. However, there is a difference in how they are taken into consideration. 'Appearances' become part of a set of ideas or models that step by step, because of their diffusion, solidify and silently take shape, scholarly interpretations and theories (i.e. the conception of the network company). They are taken for granted and the way to study a specific phenomenon. But the affirmation of 'appearances' eliminates 'apparitions'. 'Apparitions' are not part of any model, they

cannot be represented and usually emerge with difficulty. 'Apparitions' merge into the background and become un-detectable even though it is relevant for studying the phenomenon under investigation.

In the following paragraph, 'appearances' and 'apparitions' are taken into ac-count according to theoretical approaches that have characterized fields such as organization theory and information systems. At the basis of this effort, there is a tentative attempt to emphasize the role of ontology and how Heidegger's work on the phenomenology of religious life (2004) constitutes a possible step forward in order to propose further social research perspectives.

2.1The role of ontology in some classical theoretical approaches

Rationality has occupied a significant position in the landscape of social re-search (Ciborra, 1993). Methods such as scientific management (Taylor, 1911) and formal administrative theory (Gulick and Urwick, 1937) presume no limits on rationality. In other words, the individual and organizations, due to their intrinsic qualities, have access to the knowledge required to undertake activities and for this reason can fully optimize any action and decision. 'Appearances' raised by these methods show, at first glance, the inadequacy in investigating phenomena such as organizations. The notion of bounded rationality proposed by Simon (1976) is considered a step forward in this field of social research. The fact that knowledge is not fully accessible, because individuals have inherent limited logical decision-making ability and also because organizations have difficulty in streamlining operations, this leads to a different set of 'appearances' being out-lined.

These theoretical perspectives also lead to two distinct visions on the role of ICT (Information Communication Technology) and to related information systems. According to the unlimited rationality perspective, ICT could replace operators in certain scenarios. This is not the same according to the bounded rationality perspective. Here, the substitution is not predictable. If we now turn to the notion of tacit knowledge (Polany, 1966), the limits of such technology emerges. How can it be elaborated? On the other hand, ICT contributes significantly to information diffusion and consequently to a reduction in unbounded rationality.

The dynamic between 'appearances' and 'apparitions' is also questioned by strategic rationality. Individuals, organizations and information systems are not only influenced by limits in logical elaborations or by tacit knowledge but also by opportunistic behaviours. In the case of situations where there is a conflict of interests, the presence of information asymmetries can be used opportunistically in order to achieve a position of power. The transaction cost theory of a company

(Williamson, 1975) considers this scenario. At the basis of this theory there are transactions and they are governed by markets, hierarchies or clans (Ouchi, 1980) according to the costs which are not only to governed by bounded rationality but also by opportunistic behaviours. From this perspective, organizations are defined as stable networks of relationships and contracts, and information systems as "the network of information flows that are needed to create, set up, control and maintain the organization's constituent contracts" (Ciborra, 1993, pp. 116). 'Appearances' which emerge from the transaction cost theory outline a significantly different concept of organizations, in this case markets and clans are seen as organizational forms as well, and information systems, influencing transaction costs, become instruments of organizational design enabling the transition from one organizational form to the other.

Unlimited rationality, bounded rationality and strategic rationality emphasize the efficient aspect of organization and information systems. Nevertheless, another characteristic is increasingly important: organizational change. For example in specific circumstances managerial efficiency is not sufficient for managing a turbulent environment. Adaptive rationality defines this form of optimization and stresses the role of learning. Argyris (1982) is among the pioneers of this theoretical perspective, however, the concern, here, focuses on Ciborra and Andreu's (1996) work. The resource-based view of a company (Amit and Schoemaker, 1993) is at the basis of this work. According to this view, any resource owned by a company is considered a resource and resources become capabilities due to organizational routines. Therefore, an organization is seen as the sum of the resources, capabilities and organizational routines at any given point in time. Core capabilities are particularly important rendering organization inimitable and competitive. A so called learning ladder is proposed in order to pursue a competitive edge.

The first level of learning is the routinisation learning loop which concerns it-self with work practices. It encompasses two types of learning: learning for trans-forming resources efficiently and the implementation of new learning resources (innovative technology for example) which leads to new work practices. At the basis of this learning activity there are "institutional arrangements, cognitive frames and imageries that actors bring and routinely enact in a situation" (Ciborra, 1993, pp. 29) which in turn shapes the learning activity.

The capability-learning loop identifies the second level of learning. In this case, the transformation does not focus on work practices but what drives them. In other words, the focus is on organizational routines and more generally on programmes and actions that govern an organization in order to achieve a static efficiency.

Two more elements then are included in this discourse: the competitive environment and the organization's directive. So, we are no more in the realm of static efficiency as the point now is to achieve a competitive advantage in the milieu in which operations take place. This can be achieved through directives which are able to deal with changing situations. The level of learning whereby the objective is to extract core capabilities is addressed in the strategic-learning loop.

These three loops constitute the learning ladder model. However, another loop can be identified and considered: radical learning. This learning is required when profound changes take place in the environment or in the business mission. Work practices and organizational routines stop responding to organizational needs and a complete restructuring is required.

The learning ladder model reveals itself to be not only as an instrument to intervene in the several levels of organizational learning but also in information systems design. For example, how does the introduction of Enterprise Resource Planning (ERP) influence the routinisation-learning loop, the capability-learning loop and the strategic-learning loop? Another way of looking at this is to consider which information systems are able to support the routinisation-learning loop, the capability-learning loop or the strategic-learning loop? Despite this, no information system supports radical change at the moment.

The business ladder model emphasises 'apparitions' that focus on change rather than efficiency, learning rather than bounded rationality or opportunistic behaviours, work practices, organizational routines and core capabilities rather than transactions or decision making processes. Can it be meaningful to rank research methods? In some cases, there clearly emerges a more comprehensive method to investigate a specific phenomenon. In other cases, research interests can prevail and, according to such research interests so does method selection. Nevertheless, the objective of this paper is to throw light on 'appearances' and ontology which tends to be excluded in social research scenarios.'

2.2Sense of 'content', sense of 'relation' and sense of 'actualization' or 'enactment': a way to emphasize ontology?

Heidegger's work on the phenomenology of religious life (2004) provides an opportunity to highlight 'appearances'. At its core foundation there is a comprehension of reality based on sense of 'content', sense of 'relation' and sense of 'actualization' or 'enactment'.

Sense of 'content' refers to entities present in a situation: objects, people, physical and temporal circumstances etc. If we now focus on the theoretical approaches addressed before, sense of 'content' represents roles, rules and regulations, organizational charts, technology, ICT, attitudes, values, cultures etc. Furthermore, it delineates a facet of existence or reality that emphasizes the objectivity and materiality of entities and also what is experienced. It highlights the objective aspect and the characteristics of the 'content' under examination. In his study on information infrastructures in Milan, Ciborra (2005) suggests that sense of 'content' is represented by hardware, software, cables and wireless systems that have been installed in the city and, in addition to these, the usage rate of telephones and computer networks both in the private (citizens and companies) and in the public sectors.

Sense of 'relation' refers to the network of meanings and references among entities of the same situation. It answers to the 'how' question rather than the 'what' question that typifies the sense of 'content'. Therefore, how is 'content' connected? That is, how are its components related to each other? In addition, how these connections are experienced? To answer to these issues means to investigate relationships and references established within the sphere of 'content'. Focusing now on the theoretical approaches analysed above, work practices, organizational routines, core capabilities, transactions and their forms of government (markets, hierarchies and clans), and decision making processes can be viewed under the group of sense of 'relation'. This is due to the fact that these elements contribute to outlining modalities through which organizations act both internally and with the environment. Ciborra (2005) in his study on information infrastructures in Milan suggests that information related to the range and the characteristics of the city network and its usage rates are not sufficient for examining their role. The research inquiry should be broadened to include the social, political and business relationships of which these infrastructures are a part of and the modalities through which they are influenced. So, sense of 'relation' has involved the investigation of courses of action and the capabilities to set up relationships through 'content' within a territory and at a global level as the fundamental way for under-standing if and how this network is instrumental for Milan's development.

Both sense of 'content' and sense of 'relation' do not seem very helpful for investigating 'appearances'. They provide a level of comprehension of reality and, more precisely, of organizational phenomena that is in the stream of 'apparitions' examined so far. It is sense of 'actualization' or 'enactment' that can lead us to draw attention to what usually is left behind in social research. It prevents to consider objects of analysis out of the stream of life that emphasize, on the

contrary, objectifying descriptions and a conception of reality lacking a sense of unity. Existential terms are proposed, then, as a unifying factor that contributes significantly to the understanding of phenomena under examination (Ciborra, 2006).

Sense of 'actualization' or enactment answers to the 'how' question as well. However, the focus now moves towards how 'content' and 'relation' have been enacted and made active. Precisely, the point is to grasp attitudes and the ways in which existence informs 'content' and 'relation' as sense is created through life's practices. However, to highlight life enactment prevents us in placing excessive importance on the objectification of 'content' and 'relation' which casts a shadow on their actualization and how existence is carried out through the 'senses' of content and relation. In order to investigate Milan's information infrastructure 'in action', Ciborra (2005) pointed towards the ethnographies in case studies where at the basis of these methods is the objective to investigate effective meanings and concrete experiences that information infrastructures provide.

In the organization theory field, the use of the term enactment requires further specifications due to Karl Weick's important works (1977 among others). In fact, this term had already been proposed in the middle of the 1970s. However, according to Weick's theory, enactment acquires a diverse meaning. Using Piaget (1962) as point of reference, the cognitive aspect rather than the existential one is at the centre of the discourse. Here the individual is seen as an entity that punctuates and activates the flow of experience which is then transformed "in a network of causal sequences or causal map" (Weick, 1977 pp.275). In both perspectives the process of "sense making" is crucial, nevertheless, in the latter, it is intended as the final result of a mental process local circumstances are detected and elaborated (based on inputs acquired in the context of which actions are taking place). Heidegger's perspective is far from emphasizing causal sequences as the engine of the sense-making process. Rather, it is the consequence of existential disposition, mood, affectedness and emotion. The sense making process can only be represented in this way.

Sense of 'content', sense of 'relation' and sense of 'actualization' or 'enactment' highlight 'apparitions' which tend to be forgotten or, even worse, remain undetected and merge into the background. These 'apparitions' add to our comprehension of phenomena as they are relate to existential aspects. Institutional and historical circumstances, for instance, continue to be fundamental to the understanding or the interpretation, nevertheless 'apparitions', to some degree, add colour to the phenomena under investigation. 'Appearances' have also not been neglected. Sense of 'content' and sense of 'relation' represent reality in the plethora of theoretical approaches mentioned above.

But, what kind of research methodologies allow a sense of 'content', sense of 'relation' and sense of 'actualization' or 'enactment' to operate in order to examine these phenomena?

2.3A research strategy for investigating phenomena through sense of 'content', sense of 'relation' and sense of 'actualization' or 'enactment'.

The objective of this part of the research is to outline these methodologies that are able to detect 'apparitions' not only in theory but also in practice in the field of social research. Again, Heidegger's work [10] seems apt for pursuing this objective. In his early work "The Phenomenology of Religious Life" and in particular the part of it entitled: "Introduction to the Phenomenology of Religion", methodological aspects are investigated in detail even though they are in the fields of history and philosophy. This means that, of course, the organization theory and the information systems disciplines are not taken into consideration. Nevertheless, it is believed that these are points of contact between the latter and the disciplines studied by Heidegger, and lead to a sense of 'content', sense of 'relation' and sense of 'actualization' or enactment are considered to be able to support research methodologies in several fields.

Ciborra (2006) asserts that the research methodology followed by Heidegger in his early work "The Phenomenology of Religious Life" (2004) and in particular a part of it called an "Introduction to the Phenomenology of Religion", is in this group of case studies (this part is dedicated to a study of Pauline letters and specifically the Letter to the Galatians and the two Letters to Thessalonians). Yin in his book "Case Study Research" (2003) would not agree completely on this stance and, and would identify, rather, this research strategy as related to the field of history. In fact, case studies characterize themselves because of the focus on contemporary events and among research methods it is possible to count direct observation and interviews. Of course, the Letters have been written a long time ago and now these techniques are no longer available. Nevertheless, Heidegger suggests "to see the situation such as we write the letter along with Paul" (2004, pp.62) indicating that is possible to present the study of Pauline letters in contemporary terms and Yin's framework for conducting such case studies seems apt for investigating them. In particular, this framework lends itself to research situations in which the boundaries between the phenomenon being investigated and its con-text are unclear and especially if there are more variables isolated than the data to represent them.

According to Yin's paradigm (2003), a research methodology can be subdivided into 5 components: 1) a research question; 2) its propositions if any; 3) its unit(s) of analysis; 4) the logic of linking the data to the proposition; and 5) the criteria for interpreting the findings.

2.3.1The research questions

The research questions are the centre of any research study. So, what are the research question posed by Heidegger? It is the phenomenological understanding of the life of early Christians. His objective is not that one should investigate his-torical aspects of this phenomenon focusing on the development of religious movements during the Roman Empire or to apply a theological approach to the exegesis of the dogmas emerging from the Letters. It is not even a philosophical analysis in one takes a Neokantian perspective, for instance, in order to study the cognitive patterns of religious thinking established in that context. The objective is to highlight concrete life situations and the consciousness of life in which 'content' and 'relation' are equally involved (Ciborra, 2006). The reason why Heidegger focused specifically on early Christians is related to the possibility to access life in moments of important transformations and so to disclose the interior aspects rather than the cognitive side of human beings.

2.3.2Issue sub-questions or study propositions

Often the research question is too general for indicating the direction that the study will take but issue sub-questions (Creswell, 1998) or study propositions (Yin, 2003) can be helpful for this proposal. Therefore, did issue sub-questions or study propositions characterize the study of Pauline letters? In the Letter to the Galatians, it raises the question if it is the 'law' (Jewish religion stresses a rule-abiding law) or 'faith' that paves the way to salvation. In the second Letter to the Thessalonians, it is the modality of the 'Having-Become' (the passage from Paganism or Judaism to Christianity) and the waiting of the second coming of Christ (Parousia) which is the question at stake. Heidegger cites the first Letter to the Corinthians to investigate the life of early Christians emphasizing the 'as though not' aspect. That is, slaves or freemen, Greeks or Jews continue to have their own role in communal life but 'as though it was not' valid because all of them have become Christians (Ciborra, 2006). All of this evidence can be interpreted as the sub-questions or study propositions that contributed to detailing the research question which is under examination.

2.3.3The units of analysis

The third element of the research design is the unit of analysis. To isolate it poses a fundamental problem in order to define the characteristics of a study of this type. At first glance, the Galatians and the Thessalonians, who were the main audience of the Letters, seem to represent the units of analysis but on closer inspection it is Paul, the author of the Letters. It is through his role that the re-search

question is examined in further detail. In addition, Paul is seen at the centre of three "worlds": the 'surrounding world' (milieu), the 'communal world' and the 'self world' (Heidegger, 2004). The 'surrounding world' represents the interaction not only with material objects but also with science and the arts (in the case of the Letter to the Galatians the struggle in the Jewish-Christian community on the role of the law, for instance). The 'communal world' delineates other human beings not as indistinct subjects but as subjects endowed with specific characters (i.e.: the "Having Become" of Thessalonians) and the 'self world' concerns the dedication to oneself to the disciplines of science and the arts that absorb one's existence (i.e. Paul's vocation or his anguish in confronting the second coming of Christ). After all, it is the overlapping of these three "worlds" that forms the unit of analysis. Therefore, even though Paul is at the centre of the analysis, referring to these "worlds" contributes to significantly enriching the range of the units of analysis. Nevertheless, it is inappropriate to state something about the relationships between "worlds" even though both the 'communal world' and the 'self world' belong to the overarching 'surrounding world'. The risk is to slip into area of epistemology whereas the focus, at this stage, should be on ontology

2.3.4Linking data to propositions and criteria for interpreting the findings

The collection of data and information on the basis of the three steps mentioned above lead to the final phase of the research strategy. That is, to see if it effectively materialized as an appropriate answer to the research question at stake. In this context a prominent role is played by theoretical propositions. A theory is seen as those ideas that cover all five components of the research design (questions, propositions, units of analysis, logic connecting data to propositions and the criteria for interpreting findings) (Yin, 2003). Sutton and Staw conceive of it as a "story about why acts, events, structure, and thoughts occur" (1995 quoted in Yin, 2003 pp. 29). In other words, there emerges a rationale that links all these elements in a comprehensive way through a predicted pattern of specific variables, a presumed set of causal links or a complex chain of events (Yin, 2003). Therefore, a research study and especially a case study can be seen as the corroboration, more or less as a series of facts and events that form a framework of predefined connections.

In contrast, Heidegger's approach is against theory. The "why and for what reason" are theories seen as an obstacle in order to investigate reality and the sense-making process. At the centre of this argument lies factual life experience (Heidegger, 2004). Factual life experience is intended as something more than a cognitive experience and may not be interpreted through epistemological perspectives. Objects are transformed into a "world" so that what the self experiences and what is

actually experienced are no longer separated. What is relevant the how individuals stand in relation to events in everyday life. In factual life, subjects do not experience themselves in a series of acts and procedures. Rather, what the individual experiences is related to a gamete of human emotions such as hurt, pain, happiness and joy. From this perspective the basis of sense-making comprises of all three senses ('content', 'relation', 'actualization' and 'enactment') but they do not simply co-exist. It is much more complex, there is a totality of sensation which occurs they are all understood which leads to "rationale" (verbum internum) (Heidegger, 2004). However, this is not intended as a chain of events or as an established and rigorous order of entities. On the contrary, this "rationale" is strictly connected to specific historical conditions rather than to a predefined order. Heidegger points to the concept of abeyance in order to specify the level of under-standing proposed as it is in the enacted situation that it occurs. A situation in which a co-projection of the three senses converges ('content', 'relation', 'actualization' or 'enactment') leading to the transition from an object-historical complex to an enactment-historical situation.

Chapter 3

Technology and information technology through the lenses of a cognitive approach and a phenomenological approach

In the general use, the term technology suggests an idea of sophisticated machines that carry out complex tasks automatically, for example. Technology is considered a whole of instruments that produces makes and works. It supports people in everyday life. Besides, it is unquestionable that the importance of technology is growing every day and is becoming an active part of people's lives. People are surrounded by technology. At home and at work technology is an important beings' partner, for example.

The objective, here, is to investigate the nature of technology and how it enters in the life of each of us. In order to study these two aspects a cognitive approach (Marradi, 2007) and an epistemological approach (Husser, 1970; Heidegger, 1962) are going to be proposed.

The former outlines a general framework that contains and portrays reality that surrounds us. This reality is reached through knowledge that is constituted by the sphere of references, the sphere of thinking and the sphere of language. The sphere of reference represents all possible objects of thoughts (not only physical objects but also actions and reflections). The sphere of thinking concerns psychological means that humans being have at their disposal to know references. The sphere of

language represents methods used to communicate and record thinking. But this approach leads to a static analysis. It describes a picture of reality; on the other hand, it is dynamic and is in continuous evolution as elements of the three spheres interact with each other. Therefore it is important to analyse processes of knowledge diffusion and evolution; how knowledge is used and how subjects consider it.

In this proposal we are going to use the phenomenological approach. It is a philosophical approach founded by Husserl (1970) who considers philosophy the science of common sense. In fact, the purpose of this approach is to analyse what is manifest, what is tangible and perceptible. It is not interesting to examine what there is beyond phenomena and what appears. This approach suggests that the object of knowledge is the look, what reveals itself and what is naturally detectable using the senses. Here, it is not only important to consider reality or matter, nature and human beings, as obvious elements that surround us, but also how subjects interpret them, how they make sense of them and how these elements take part in everyday life. The point is to see what permits us to understand situations, what gives objects or human beings a precise role and a precise meaning and what permits subjects to act in a specific social context, for example.

Heidegger's thinking (1962) suggests a further step analysing knowledge: what pushes subjects to know and understand the environment that surrounds us and what defines the understanding of it, namely for which reason subjects make a specific sense to an environment. Heidegger maintains that the idea of project, of capabilities and opportunities is a fundamental attitude of human beings. Each thought and action of subjects is characterised by this idea that drives them in everyday life. Therefore the knowledge and the understanding of a specific environment is driven by aims to pursue a plan, for example. These aims make sense of things, nature and people and if they differ even their meanings change.

Technologies, examined by the cognitive approach, show their elements and how they are made. This approach tries to pick out their main characteristics and underlines differences between general technologies and information technology. On the other hand the phenomenological approach tries to examine how technologies enter into the lives of all of us, their role in everyday life and how subjects consider, give sense and interpret them as instruments that help to support and control us.

3.1A cognitive approach to reality

The cognitive approach is based on Marradi's works (1994, 2007) where he maintains that knowledge, in epistemological terms, is constituted by the sphere of references, the sphere of thinking and the sphere of language. Here, the term sphere is used as a synonym of the term domain or realm,

for example. The sphere of references is composed by all possible objects of thoughts, meaning not only physical objects but also events, people and their characteristics, actions, but also ourselves when we think about our actions and thoughts. Reality is not only formed by tangible things but also by social relations, reflections and introspection.

Thinking and precisely the sphere of thinking is a means that human beings have at their disposal to know references and it is analysed independently from its expression by language. This sphere might be subdivided into two parts: conscious thoughts that are normally expressed using language and mental operations that are often unconscious and represent automatic cerebral activity but they become conscious in particular contexts. When subjects with a particular habit, practice or experience realise that the habit is not useful anymore, in that moment they discover the nature of these behaviours. Tacit knowledge (Polany, 1958) helps to further investigate mental operations. This knowledge is difficult to analyse, it cannot be represented by mathematical or logical formula, but it affects important aspects both of the individual and social lives of subjects. To play tennis, to ride a bicycle, to go down stairs, to build a structure etc. need complex mechanical, optical and, physical knowledge that are absolutely unconscious, even if just in part, can become conscious. Similar terms can be used concerning behaviours that are requested in specific social contexts. These behaviours correspond to social rules, habits, conventions that are adopted in different situations like to hold in a newspaper stand, among a group of friends, in a workplace etc.

The sphere of language completes the analysis of knowledge using the cognitive approach. Language is not the only system by which subjects communicate and record thinking. In fact, gestures, facial expressions, body movements, drawings and forms have the same functions. This approach analyses only linguistic signs because of their importance. In fact language might be defined as a system of signs produced and understood by subjects of a certain community that have meanings in a large measure shared by those subjects, a considerable stability in time and rules structures that are known by the subjects' (Marradi, 1994). Nevertheless, this system evolves suggesting a subdivision of language into ordinary language, special language, technical language and formal or artificial language. Ordinary languages are used in everyday life and represent the structure, the trunk that supports other kinds of language. Special languages are formed by specific social groups in consequence of their stability and frequent social interactions inside them. Technical languages are special languages formed in professional environments and are characterised by descriptive and argumentative functions. Formal or artificial languages derive from conventions that exactly define the meaning of signs. The transition from special to formal language is characterised less and less by

the importance of semantics (relations between signs, their meanings and their references) in respect to syntax (rules that drive relations among signs). For example mathematics or computer languages are based on rules that govern relationships among signs that have a specific and single meaning. Moreover, formal language overcomes problems of pragmatics (relations between signs and users who use and interpret them), that is to say, interpretations of signs by subjects. In fact, communication is possible even if people do not speak the same language or come from different cultures so that formal language permits communication between men and computers.

The cognitive approach posits several questions for investigating reality. One of these questions originates from the fact that thinking cannot exactly reproduce or photograph references. A specific event or even an object (references) can be conceived differently by different persons. Concepts that can be used to express them are not necessarily the same. Therefore, there is not a rigid correspondence between references and concepts used to represent them. Leona Tyler (1969) states that there is no object with inherent characteristics that forces its perception in a specific way. On the other hand, to consider entities independent from concepts used to represents them is equally misleading. In this perspective, Weber (1964) agrees with the fact that concepts and judgements are not reality and they neither copy it but they allow its ordering in a valid way.

But impossibilities of reproducing reality exactly through thinking are not the only questions. Another one derives from the fact that references have to be recorded and communicated. The relationship between objects and events, on the one hand, and language, on the other hand, dates back to Ancient Greeks. At that time, it was common the objectivity of language. That is, the idea that there is an authentic correspondence between references and words that designate them. Even during Middle Age, according to the scholastic philosophy, this idea persists even though thinking was considered the origin of words. However, in a second moment, it took place a detachment and words became objects another time. Even in the last century, this stance has seen important supporters as the Vienna Circle and the behaviourist school in psychology. Nevertheless, recently, it has lost steam. Tyler (1969) affirms that non only references have no inherent characteristics in order to perceive them exactly in the same way but also they have no characteristics to be linked to a specific name. The strict correspondence between references and words is not thinkable given the richness and complexity of the former in respect to the latter. A word can indicate several objects or events as time passes by. In fact, it is continuously subject to use in different social contexts. Therefore, the link between references and words cannot be rigid and, rather, elasticity typifies it. However, languages cannot be used arbitrarily as they have their own structures binding expressions. Among the reasons

that prevent to establish a strict link between references and words, there is the mediation role played by thinking. Words can be conceived as symbols of concepts elaborated by our minds. They are instruments in order to outline our experiences and all of this contributes to further move away references and words.

The question concerning the relationship between the sphere of thinking and the sphere of language is epitomized by the distinction between concepts and terms. Concepts are copies of references that take place in our mind. As it has been mentioned above, they are devices in order to manage life experiences or events (Weber, 1964). Therefore, they are significantly distinct from terms that can be conceived as components of a language established in a specific social context. Nevertheless, supporters of a rigid link between concepts and terms are numerous even in this case. From Cartesian logicians of Port Royal in the middle of the 17th century to Chomsky (1957), it has been developed the idea that a language is at the origin of concepts. And in some sense, artificial languages work in this way. They establish a rigid link between concepts and terms but at the cost of abstract and relatively plain references to which they refer to. But, normally the thinking is fluid, volatile and solidified because of language. What is unclear, fluctuant, and nebulous in our mind acquires stability turning to language and through it also memorized. Of course, this is not only valid for a singular individual but also for other members of his/her social context. Communications becomes available when concepts have been depersonalised and codified trough an inter-subjective code insomuch as language can be conceived as the public aspect of concepts.

The questions posed by the cognitive approach throw light on the limits of scientific research. The study of reality, necessarily, recurs to concepts and to their expression through a language. It has been showed above the existing gap between references and thinking, the gap between references and language and the gap between thinking and language. Therefore, it is important to be aware that observations and statements achieved by scientific methods suffer about these gaps. Observations and statements are not about reality but about something different. However, not in all cases these gaps are present. There are disciplines like math, geometry and logics in which references and concepts are strictly linked each other. But here reality is not involved. These disciplines do not imply the five senses as their objects of investigations are human speculations. Moreover, they are also characterized by a rigid link between concepts and words being based on artificial languages valid everywhere and in which each sign has only a specific meaning.

3.2Technology and information technology through the lenses of a cognitive approach to reality

The point now is to see if knowledge outlined through the sphere of references, the sphere of thinking and the sphere of language can be used to investigate technology and information technology. Particularly, can these three spheres represent their essence and their intrinsic characteristics? At first, let's define technology. According to the dictionary M. Webster, technology is "the totality of means employed by a people to provide themselves with the objects of material culture". Technology as "the totality of means", suggests an idea of objectivity and matter that characterises the sphere of references. In fact this sphere represents all possible objects of thought both material and immaterial. However, the definition proposed suggests another idea. In fact, technology can be employed "to provide themselves with the objects of material culture". This idea implies that technologies cannot only be analysed as simple objects as they contain the capabilities and power to act on references thereby producing and transforming them.

The sphere of thinking might help us to better understand this point. This sphere has been defined as psychological means that human beings have at their disposal to know reality or references independently from their linguistic expression. Even though it is not possible to consider human beings as technology, it can be regarded as a whole of instruments produced by subjects to know reality or references. Technology can be conceived as tanks of thinking materialised into objects that produce other objects. Human beings delegate and transfer their thinking to technology. In fact humans enable technology to substitute for mankind. These considerations permit us to maintain that technology is both part of the sphere of references and the sphere of thinking as they are humans' instruments to know reality or references.

As it was quoted above, the structural approach argues that thinking cannot reproduce or photograph references exactly. This assertion suggests a deeper analysis of technology. Even though it is used to carry out specific tasks, its use might provoke effects that are not expected at the start. Pollution, greenhouse effects and nuclear energy treatments are examples of the consequences of the use of technology. These effects can be considered gaps between the sphere of references and the sphere of thinking.

Heidegger (1977) tries to analyse reasons for this gap. He maintains that modern technology is based on the exploitation of nature. In this proposal Heidegger uses the term provocation to underline that mankind exploits nature to get what is necessary for his needs. In order to explain this concept he

shows how a bridge on a river exploits nature differently in respect to a hydroelectric power station. In the latter case nature is deeply used and employed in order to obtain energy that is hidden and not present naturally. But Heidegger suggests another reason for this gap. Humans use technologies as instruments and as a means without paying attention to the consequences provoked by their use. In fact, it is important is to achieve a purpose; to produce or make a particular thing, whereas the side effects of their use might be neglected.

So far the cognitive approach has been used to investigate technology in general, but the purpose of the present work focuses on a particular kind of technology: information technology (IT). IT might be defined as the totality of means employed by a people to provide itself with the objects of data, voice and image. However, can we consider IT in the same way as we do technology, since the sphere of references and the sphere of thinking represent it? Surely, IT is material object of thought and thus can be defined by the sphere of references, but it is also a tank of thinking and an instrument to know reality or references. Therefore, IT makes up knowledge represented by the sphere of thinking. But, at the same time, it is a calculation instrument, and a mean that produces, records, stores and spreads data, voices and images and the sphere of language just represents how thinking can be spread and recorded.

In addition, the cognitive approach warns us about relationships between the sphere of thinking and the sphere of language. Language cannot reproduce thinking exactly because the latter might be considered as a fluid and continuous process of ideas, intuitions and imaginations, whereas language objectifies and fastens thinking to meanings that are shared. For this reason ordinary language is flexible and the same word can have different meanings in different social contexts. This flexibility does not concern computer languages in which each sign has a specific and single meaning. These gaps between thinking and language and between ordinary language and formal languages (such as computer languages) can generate some limits of application for instruments in artificial intelligence and expert systems because these systems risk representing the thinking of designers that could not be transferred perfectly to users.

The concept of knowledge proposed by the structural approach might suggest an overall vision of technologies and the importance of technologies in the development of knowledge. Moreover it stresses the difference of IT in respect to other technologies. In fact IT contains all three spheres of the knowledge concept. This might point to a complexity in designing them because of the gaps between the sphere of reference and the sphere of thinking and the sphere of thinking and the sphere

of language, but, on the other hand, IT might be a powerful instrument in the growth and diffusion of knowledge.

3.3A phenomenological approach to reality

The cognitive approach defines the means human beings have at their disposal to know physical and social reality. The three spheres are useful to represent the complex concept of knowledge; they single out elements, ingredients and materials to build knowledge but they do not show how these materials interact to form it. Thus it is necessary to analyse processes that produce knowledge.

Husserl (1970) maintains that philosophy could be defined as the science of banal and obvious truth. In fact his phenomenological approach has this purpose. The purpose is to analyse processes that form common sense. In fact phenomenology is not a thinking stream of philosophy but a methodological conception. Its purpose does not concern objects of philosophical research but how to analyse them (Heidegger; 1962).

The term phenomenology is formed by two components: «phenomenon» and «logos» that derive from the Greek language. «Phenomenon» means that which shows and puts in the light itself. It is clear and manifest. Even though «logos» has been translated as reason, judgement, concept, definition and relationship, originally its meaning was discourse (Heidegger; 1962) as means that enlighten what people are talking about. Discourse discovers and exhibits meanings. Then phenomenology highlights what is manifest. Phenomenology might be defined as the science of phenomena. What is tangible and perceptible is the object of this science. Sensitive perceptions are always true. For example «this means that seeing always discovers colours and hearing always discovers sounds» (Heidegger; 1962, 57).

The phenomenological approach is an alternative solution analysing everyday life with respect to the so-called thesis of natural attitude (Husserl; 1970). This thesis represents the common belief that the world exists and it is always in front of us with its objects, things, aspects, etc. It is independent and is not possible to control and dominate it. The world is objective and is true for everybody. On the other hand subjective reality is dependent and true by it; it is formed by each product of subjects' minds and experiences that belong to actors as individuals. The reality of common sense and natural attitude is then characterised by two levels: an objective level and a subjective level.

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The thesis of natural attitude maintains a kind of knowledge in which subjective aspects must not be present. Subjectivity is the source of errors and knowledge represents how objects, things, matter or references are realised in front of us with their characters, their nature and their structures. In this proposal, methods, instruments and rules might be used to reach exactly the nature of the object analysed. But new instruments and new technologies might permit the realisation of more knowledge about this object. Even if knowledge is temporary because of effects of these variables, there is the awareness that it is possible to reach reality and to distinguish what is true and false and what is real and imaginary (Piana; 1966).

Even if the knowledge that derives from the thesis of natural attitude is logical and rational, the scepticism1 does not cast doubt on the validity of singular knowledge, but on the premises and principles that drives this thesis. In fact the assumption of objective reality is the object of criticism of scepticism. For example, suppose I am in a dark zone and I think I see quite far away a man who is moving his arms, but, when I draw near, I discover that it is not a man but a tree moved by the wind. This example can suggest that even the tree might be an illusion, in fact a third image might take the place of the tree, because the first image seemed as real as the second. Scepticism maintains that the objective reality is a dogma because knowledge is based on subjective images that nobody can guarantee will correspond with objective reality2. Following this approach there are no possibilities to distinguish objectively what is true, false, imagination, or reality.

Even if scepticism represents an interesting approach about the validity of knowledge, it is absurd because it denies the existence of the world and what is objective, maintaining that knowledge is a chain of images. But everyday life is characterised by actual things; by actual human beings and by actual nature.

Both the thesis of natural attitude and the scepticism do not satisfy the necessity of linking real knowledge of common sense to a theoretical approach that can explain it. The concept of phenomenon might be useful at this stage. In fact it represents what appears; what is tangible and what is perceptible, while it does not depict objects or references themselves.

For example reality of an object depends on the view by which it is analysed. Different views mean different realities. They are appearances that become the core of knowledge analysis. Knowledge of «real» nature of references or of objective knowledge according to the thesis of natural attitude is no more interesting. Now it is knowledge that springs from relations between subjects and references that become the object of analysis.

Even if this knowledge is formed by perceptions, it has a character of certainty. Certainty derives from the fact that the act to perceive is sure even if there is not sureness of the object of perception. In fact, it is not possible to have doubts of subjective acts in facing the world. What are sure are not the objects that I am seeing, but the fact that I am seeing this object (Piana; 1966). Moreover acts of perception establish what is real and unreal, what is true and what is false. But realities and imagery of perceptions derive from subjective aspects and from personal acts of analysis.

So far the concept of phenomena has driven us to the validity of subjective knowledge but it does not assure that what is valid for a subject is also valid for others. Again we arrive at the problem of objective knowledge. Objective knowledge in this context acquires a different meaning. It does not represent characteristics, structures and the nature of reality, but what is valid for everybody. In this proposal the concept of validity determines objectivity and reality is the result of interrelations among subjects. Objective reality or, using Husserl's words, inter-subjective validity, is a result of a long social process in which many subjective realities interact. The result might be considered an oversimplification and a reduction of «reality» to what is appearance, but it represents the truth of obviousness in how it shows itself.

Not only does phenomenology analyse the formation of obvious and what is common sense and delineates a theoretical approach to define objective reality, but it also examines the origin of individual acts that define phenomena. Husserl (1970) defines phenomena as the result of intentionality. Intentionality represents activities and concerns of subjects toward references. Activities and intentional acts define meanings and nature of objects. For example a glass of water acquires its reality inside a context of many intentional acts. I discover it only if it becomes necessary to my activities and concerns. However, I will never reach the reality of my glass in its complexity but only that aspect regarding my intentions. Differently from the thesis of natural attitude in which individuals and references are divided into two distinct spheres, following the phenomenological approach, subjective aspects and objective aspects are inextricably connected; they do not exist alone. It is nonsense to consider subjective acts without perceived references. In fact phenomena take place

only if references are worked by intentional acts. For this reason references might acquire different aspects according to different intentions of subjects.

Conscience is the concept used by Husserl to define the potentiality of actors and subjects' capabilities to act. It does not represent the idea of a place in our inner being in which to reflect on us or a structure of spiritual or mental acts that govern our behaviours. Conscience is the whole of intentional acts referred to references as perceptions, wishes and manipulation of objects. References are part of this concept because «Consciousness is always the consciousness of something» (Piana; 1966, 90) it is not an object in itself. It is the background of intentional acts by which to activate references. The concept of awareness might be used to single out different levels of conscience. In fact intentional acts might be subdivided into a continuum from completely conscious acts to completely unconscious acts.

So far the phenomenological approach, using the concepts of appearance, validity, intentionality, and conscience, has outlined a picture and a representation of relationships between subjects and phenomena. But Husserl's work suggests a further object of analysis: the logic that drives interconnections among them. The concept of essence is used in this proposal and it represents the framework of phenomena interconnections and the plot that makes sense in phenomenological data. Essence is not only the result of correspondence between phenomenological data and intentional acts, but also an operation of subjects to put in order and to read them. When subjects make up a process, a genesis builds a defined construction of phenomena, then the phenomenological analysis might throw light on the logic that connects and makes sense to each piece of phenomenological data.

The validity of the phenomenological approach might be shown by the analysis of Leenhardt (1979) on the Canaque population in New Caledonia. In fact this population does not have the sense and the conception of the individual as an element distinct from nature. The body is plunged and dissolved in all that surrounds it. Canaque people do not distinguish the body as the place of residence of oneself or ego. Moreover the structure of social relations characterises this conception of the subject and, in fact, is the context in which the «subject» is involved that defines his status. In different contexts a Canaquan will hold different status and will be singled out by different names according to his different roles. Canaque people cannot group these different characters into a single subject, they cannot conceive of themselves separately from their social relations. In fact the loss or disturbance of subjects' social relations brings about serious existential problems to them. They are not able to be autonomous from social relations, they have no individuality and the removal from their environment is a sentence of social exclusion. A different conception of the body and subjectivity is present also in

Western history, in particular during the Greek period. Homer's epics, for example, show an idea of the body as a whole made up of independent parts that probably had no conscience and did not know introspection, even if it is not possible for us, with our subjectivity, to understand what exactly this conception of body was (Pollner; 1987).

These examples might show that the knowledge that characterises everyday life is not the result of a clear distinction between subjectivity and objectivity in which subjective aspects are considered only a source of errors, but, rather, it depends on objective aspects, as maintained by the thesis of natural attitude. But knowledge evolves from the different interconnections that characterise objective and subjective aspects and the purpose of the phenomenological approach is to analyse them. Interconnections form different frameworks, different plots that make sense in different social contexts. Now we are going to consider the process by which subject interconnections make sense. This proposal uses the thinking of Heidegger (1962).

Heidegger was a follower of Husserl; therefore his work was deeply affected by the phenomenological approach, even though later misunderstandings arose that divided the two philosophers in their thinking. These misunderstandings were provoked by the definition of the concept of phenomenology. Husserl maintains that the origin of individual acts derives from the concept of intentionality, and conscience defines the background that drives subjective intentions, while Heidegger upholds that the concepts of Being-in the-world or Dasein, using the German term, and concern represent their origin. These last two concepts are going to be examined because, even if they present the formation of everyday life and common sense in a slightly different way, with respect to Husserl's analysis, they turn out to be more useful in analysing technology.

The concept of Being-in-the-world or existence is used by Heidegger (1962) to analyse being and the roots that drive the life of each of us. These roots are deeply planted in the history of subjects. In fact human beings are always the result of their past, even if often they are not completely aware of it. The past represents the whole of experiences and for this reason is always in front of our existence as an asset to face the future. The past represents the whole of experiences and for this reason is always in front of our existence as an asset to face the future. The past might be defined by traditions. Traditions affect human beings and conceal what effectively drives them. They cover the meanings and reasons that bring about our behaviours and take them for granted. It is probably for this reason that people believe their histories are not a fundamental element in the management of everyday life.

Heidegger's work not only points out the importance of history in analysing beings, but is also the idea of possibility and project. Human beings are not considered as a whole of properties, the way objects are, but a sum of capabilities and possibilities. Each act carried out by a subject is the result of a plan or a project. This is characteristic of mankind only and is its' essence. The essence of beings is not something factual or stable, but is this idea of future, of possibilities and opportunities that are always in front of them. Each thought derives from this idea that human existence is not based on what is real and present, but on what might be in a vision of the future, the project (Vattimo; 1971).

Visions and projects are not abstract. They are plunged in an environment of things and people. The term "Being-in-the-world" suggests the conception that subjects are not beings who live in a dream world without connections with the surrounding milieu, but they are deeply engaged in all that is within reach.

In this context, objects, for example, are not simple entities provided by specific characters, but they become instruments, means to produce a work. When I use a hammer I am not careful of it but of my action and of the result that I want to achieve while hammering. In this case projects and actions transform objects from simple entities in the active part of my life and they become part of my being. Even the moon might become an instrument or a means if its light gives me particular feelings or moods (Vattimo; 1971). I take all that is around me to pursue my life vision.

Heidegger (1962) uses the concept of concern to explain how simple entities are transformed into instruments at the disposal of subjects' lives. This concept might be defined as the completion of the concept of Being-in-the-world. In fact, it represents the way by which beings build their existence, the way by which they consider, value and use things and people that surround them. For example: «having to do with something, producing something, attending to something and looking after it, making using of something, giving something up and letting it go, undertaking, accomplishing, evincing, interrogating, considering, discussing, determing...» and also «leaving undone, neglecting, renouncing and taking a rest» (Heidegger; 1962, 83).

The time element is important in this discourse. Time is the common denominator that connects the past and the roots of beings with their projects and their future. Considering the time element, the concepts of Being-in-the-world and concern can represent fundamental attitudes of human life. Fundamental attitudes do not only delineate subjects as entities who subjectively observe, establish, verify and describe what is present and within reach, but also subjects who, endowed with

experiences, are thrown into the future designing their life according to the surrounding milieu (Volpi; 1994).

The analysis of the Being-in-the-world and concern concepts might give us some insights into the knowledge concept. Knowledge characterises everyday life and is precisely the logic that drives interconnections among phenomena, that is to say the plot that makes sense of phenomenological data. This logic is based on the idea of project, of possibilities and opportunities that characterise subjects. In order to pursue projects, subjects have at their disposal the world of things and people. Knowledge then represents capabilities of beings to use what the world can offer. Capabilities are both the result of the history of each subject and of his ability to manage these raw materials in pursuing his different projects.

Heidegger (1962) emphasizes another aspect that comes out when our actions face some difficulties. They do not work anymore and it is less possible to follow a plan. For example, suppose the hammer I am using suddenly breaks. In this moment my attention is moved away from the plan and by what I want to do, to the hammer. In this moment the hammer is no longer an instrument but it is a simple entity with its characteristics and structure. Moreover it becomes, immediately useless and is also in the way, because now the hammer is an obstacle in my plans.

Heidegger's work now permits us to single out two different kinds of knowledge. The first, connected to the subjects' projects, consents to use resources at disposal in the subjects' environment, while the second, brought about by a breakdown while working on a project, shows the single elements that form the environment.

3.4Technology and information technology through the lenses of a phenomenological approach to reality

The cognitive approach has been used to analyse frameworks and elements of technology. Now the phenomenological approach is going to be applied to examine how technologies enter into the life of each of us and in which context they become part and how we make sense of them.

How do technologies enter into the life of each of us? Using the phenomenological approach and in particular Heidegger's thinking (1962) technologies are not particular objects endowed with particular characteristics, but instruments and means driven by subjects' actions and projects to produce or transform things. Technologies have become an active part of our lives; they support, control and help us everyday. But this affirmation is not completely true because, as it has already been quoted, a

breakdown can happen using instruments. In this case they are transformed into objects and into simple entities with their characteristics and structures and a new knowledge is necessary to rechange them into instruments.

Ciborra (1996) suggests three ways to show how technologies and in particular IT enter our lives:

- 1) Perception. Perception represents technologies from a scientific point of view. They are thought of as the whole of characteristics and structures that are in front of us, but they do not become part of a wider context of meanings. Perception considers technologies to be specific objects not affected by their surrounding environment. They might be considered abstractions because they have no ability to overcome the impact of practical uses.
- 2) Circumspection. Circumspection represents technologies as objects that have to face obstacles of implementation. A technology is seen as a possibility among others to produce and transform things. As such, it is always subjected to breakdowns. Moreover breakdowns are considered normal events that might be used to ameliorate implementations of technologies.
- 3) Understanding. Understanding represents technologies as things that become part of a context of meanings. Technologies turn out to be instruments that are taken for granted. They might disappear in use. This is different from the previous cases in which technologies are abstractions of functions or objects that face obstacles of implementation. In this case the hammer vanishes in the action of hammering.

These three ways show how technologies enter our lives. They might be considered a continuum in which on the one hand technologies are independent entities characterised by their own properties and structures whereas on the other hand they disappear in a flow of actions.

The analysis carries on examining only the 'understanding' because it is considered the norm and characterises common uses of technologies. Moreover this way might be the objective at which subjects aim in using technologies. In fact they seem to be invisible and they do not place obstacles in the way.

Technologies have no meanings alone. They always belong to a whole group of elements. They need to operate a whole of installations and energy. Each element needs other elements. A garage might be represented by a whole group of things and each of them functions in relation to others. Elements form a chain according to their utility and characteristics. Relationships are established among them. This concept is well shown by Heidegger (1962, 97):» Equipment - in accordance with its

equipmentality - always is in terms of its belonging to other equipment: ink-stand, pen, ink, paper, blotting pad, table, lamp, furniture, windows, doors, room. These 'Things' never show themselves proximally as they are for themselves so as to add up a sum of realities and fill up a room. What we encounter as closest to us ... is the room...(as) equipment for residing».

Heidegger's assertion suggests another question: what is the logic that drives relationships among technologies? What is the idea that permits the constitution of a garage, for example? It is the work: the objective of our activity. In the case of the garage the objective is to repair cars. It is this idea that connects technologies to each other. The analysis of the Being-in-the-world and concern concepts might give us some insights into the knowledge concept. Knowledge characterises everyday life and is precisely the logic that drives interconnections among phenomena, that is to say the plot that makes sense of phenomenological data. This logic is based on the idea of project, of possibilities and opportunities that characterise subjects. In order to pursue projects, subjects have at their disposal the world of things and people. Knowledge then represents capabilities of beings to use what the world can offer. Capabilities are both the result of the history of each subject and of his ability to manage these raw materials in pursuing his different projects. Technologies, following the phenomenological approach, become part of a context formed by a logic that takes into consideration both the whole of procedures that drives their use for a particular purpose and users' tastes, characteristics, habits, etc. of technical production.

So far, we have analysed first the three ways by which technologies enter our lives, then how they are connected to each other and now the objective is to see how subjects make sense of them.

It was already quoted that the essence of human beings, what characterises only mankind, is the idea of future, of capabilities and opportunities that are always in front of them. In fact each act carried out by a subject is the result of a plan or a project. But what brings about projects? What determines and makes them up?

Each project is the result of subjects' histories. Each of us knows a specific social context; its rules, characteristics, values, habits, etc. This social context takes part in forming us. The knowledge of this context gives us a vision of what and who surrounds us. It permits us to interpret, to make sense and to interact with the world because each part of it is interconnected in a logical and legitimate way. It is this understanding of the context, of the environment that permits us to act on it. These kinds of actions have been defined as projects. Projects are not only the result of the understanding of social contexts and of capabilities to act on that understanding, but also the result of instruments at our

disposal. Projects are based on potentialities of resources that may be used to pursue them. Namely it is necessary to know what results are attainable to employ means that are within reach.

Technologies represent this aspect of project concept. They are means and capabilities at subject's disposal to pursue projects. In fact technologies make up the environment in which human beings act. They are instruments used by human beings to follow, plan, and project instructions because they make sense to them. Plans and projects form a framework in which technologies hold a specific rule. Technologies become part of subjects' lives supporting and helping them.

The phenomenological approach and the knowledge of everyday life permit us to analyse technologies in a wide way. In fact technologies are elements of a mosaic in which everyone is connected to each other. Technologies are a gear of a bigger mechanism. This approach suggests that technologies are not only things employed in production and transformation, but they are also objects of cognition as suggested by Ciborra's work. Moreover, they are a ring of a chain of a whole of procedures driven by the purpose of developing a specific task. Finally technologies are part of subjects' lives as capabilities and opportunities. In fact capabilities and opportunities are the basis of the essence of human beings' vision of the future.

Even though the knowledge of everyday life suggests an analysis of technologies as an element of a wider context in which even social and cognitive components hold a fundamental importance, some thinking traditions examine technologies differently.

Ellul (1990) is a representative of the deterministic technical approach. He maintains that subjects are instruments driven by technologies. Technologies form a system that is completely autonomous from social structures. Societies are forced to employ them; otherwise they are condemned to decline. Societies become the result of rules and co-ordination processes that are established by technological laws whereas subjects have no ability to affect them. Subjects governed by these devices, which are without control, form a totalitarian system. All aspects of social life are subjected to technological power. The assembly line and Charles Chaplin's movie Modern Times, in which human beings become part of a mechanism, represent the idea of technologies of this approach.

A more balanced approach is proposed by Levy (1990). He maintains that it is not useful to subdivide between the empirical domain, for example things and technologies, that is to say all that is experienced and perceived, and the transcendental domain, for example languages, symbols, values etc. That which is experienced and perceived is not separate from that which permits experience frameworks of perceptions. In fact the two domains are interconnected and they form a context

characterised by equilibrium based on specific institutions, communication systems, habits and attitudes towards people and the environment, technologies etc. This equilibrium is neither the result of the influences of the technology or empirical domain, as maintained by Ellul, nor of the influences of the transcendental domain. But it derives from reciprocal influences. Levy maintains that technical changes are one of the most important elements that might destabilise this equilibrium. In fact the coming of computers has deeply affected old equilibrium in wide aspects of developed and developing societies. These new situations put into play strategies and alliances among social actors until a new equilibrium is reached with its own institutions, values, morals and culture. Levy maintains that a reason for fear, suspicion and distrust toward new technologies is brought about by the decline of values and beliefs provoked by them. Therefore he underlines that implementation of technologies should analyse and discuss these concerns at political and social levels assuming equilibrium changes, in order to drive them in a democratic and legitimate way.

Continuing to analyse technologies not only as a whole of objects governed by its own rules but also as a result of their interactions with social and cognitive aspects, we must consider Flichy's work (1995). Flichy's approach differs from Levi's by analysing these interactions from a less abstract point of view. In fact, studying technical innovation, he shows how the affirmation of specific technologies is not the result of an invention of a genius closed in his own laboratory, but the result of a multitude of interactions among researchers, industries, users, wishes, social needs and political decisions.

In this proposal Flichy uses Goffman's concept of frame (1974). Frame is defined, as what makes sense, in a specific context, that otherwise would be meaningless. Namely frame represents the knowledge of the context that allows subjects to understand the phenomena around them and act accordingly.

The socio-technical frame is the frame used by Flichy in analysing processes that permit affirmations of technologies. It is formed by the union of two other frames: the functioning frame and the use frame.

The functioning frame is the environment that permits technologies to work. Design of technology start from sketches, outlines and plans but these ideas have to face problems when transforming them into objects. Transformations are bound by technical possibilities and normal prototypes differ in respect to initial plans. Simondon (1989) defines this passage as the physical translation of an intellectual system. But the constitution of a functioning frame needs another passage. The passage

from prototypes to objects of normal production. Flichy defines negotiations as the whole of procedures necessary in this proposal. These negotiations could be between inventors and the scientific community or between conferences and publications in order to obtain production approval; between inventors and producers to solve problems joined to large productions and cost productions; between inventors and users to study interfaces that respond to their characteristics; and between inventors and law to keep to safety measures or international regulations. Finally, the functioning frame is completed and technologies produced by it work and are at people's disposal.

Technologies might be analysed not only from the technical and functional point of view but also from the users when examining what is the collective imagination of which technologies become part. For example, in France, telecommunications were considered during the 18th century as instruments used by the aristocracy for love affair communication, while after the revolution they were a means to manage state affairs and at the beginning of the 19th century as a system to transmit stock exchange information. Flichy (1995) suggests the use frame in this proposal.

Initially designer teams form the use frame. They pursue projects that address social expectations and people's needs and dreams. Designers project what technologies might catch users' interests. They assume their tastes, habits, attitudes etc. But this use frame has to persuade financing bodies and entrepreneurs to permit realisations of these technologies. Interactions among these subjects permit use frames to take a more completed form. Normally use frames are complementary in respect to similar technologies because there are more possibilities that they will be successful. But the success and the affirmation of a use frame derives from the impact on users and if they accept it or whether they have elaborated a different one. In the last case marketing functions are very important, otherwise some modifications of producers' use frame are necessary. Continuous interaction between users and producers allows the affirmations of a stable use frame that might be considered a social norm or a convention because it becomes taken for granted by all subjects.

Flichy maintains that the socio-technical frame is not the sum of the functioning frame and the use frame, but an alloy between them. Only this new product permits technologies to make them known, even if at the beginning of development the rule of functioning frame is more important because ideas of potential users are vague whereas reflections are concentrated on technical problems. On the other hand when technologies are developed, the use frame is more considerable because the main problem becomes their diffusion. Moreover the affirmation of a socio-technical frame needs a long time and long interactions between functioning and use frames until a large number of producers and users adopt it and other frames are abandoned.

Finally Flichy underlines two elements that highlight mediations and interactions between functioning and use frames: prices of technologies and man-machine interfaces. The former is a constant point of reference during the development of functioning frame. In fact entrepreneurs and financing bodies base their investment programs on forecasts of use frames. Moreover the affirmation of a socio-technical frame is based on a stable and diffused use frame and the attainment of economies of scale. These elements permit the reduction of production costs and the development of a virtuous circle between diffusion and prices. The latter represents the meeting-point between the environment of technologies and the environment of subjects. Man-machine interfaces are means that permit functioning frames to enter in use frames and vice versa. Therefore the affirmation of a sociotechnical frame is connected to their functionality. Non-functional interfaces hinder the formation of use frames. Users face problems employing technologies that are uncomfortable, dangerous, complicated etc.

As was already quoted the phenomenological approach and the knowledge of everyday life analyse technologies as active parts of our being, as the object of three different forms of cognition and as a chain of a whole of procedures and objects connected by a specific function. Levi's approach analyses technologies as the result of equilibrium between the empirical domain and the transcendental domain. Flichy's approach analyses technologies as the product of a socio-technical frame that derives from interactions between the functioning frame and the use frame. But these three approaches consider technologies not only a whole of objects and systems governed by its own rules and completely autonomous from social structures as maintained by Ellul, but also how these technologies are understood, used, thought of, invented and designed by a large number of social actors.

On the other hand, side effects such as pollution, the greenhouse effect and nuclear energy treatments are questions that are not understandable by these socio-technical approaches. In fact they analyse the conscious effects of uses of technologies, that is to say effects that are directly perceived by human beings. In this proposal the structural approach, examining the gap between the sphere of reference and the sphere of thinking, has singled out these questions. Even Ellul's approach, that seems too much unbalanced upholding the deterministic function of technologies on social structures, takes the side effects of uses of technologies into consideration.

3.5The cognitive approach, the phenomenological approach and IT design

To conclude, the objective is to find out if the cognitive approach and the phenomenological approach used to analyse technology can suggest some indications for designing information technology (IT). IT represents not only procedure-oriented applications, namely instruments that support production control, sales, accounting etc., but also co-ordination technologies that support social relationships (Ciborra; 1993). Therefore IT can be considered a link between other technologies and society.

Analysing the gap between the sphere of reference and the sphere of thinking, namely thinking cannot reproduce or photograph references exactly, the cognitive approach suggests that technologies might provoke effects that are not initially expected. In fact, human beings use them as instruments and means without paying attention to all the consequences caused by their use. What is important is to achieve a purpose; to produce or make a particular thing, whereas the side effects of their use might be neglected. Even though it is not often possible to forestall them, designers might consider side effects as real possibilities and this awareness might be useful to face these unexpected consequences.

But this approach singles out another gap between the sphere of thinking and the sphere of language. In fact language cannot reproduce thinking exactly, because the latter might be considered as a fluid and continuous process of ideas, intuitions and imaginations, whereas language objectifies and fastens thinking to meanings that are shared by everybody. For this reason ordinary language is flexible, in fact the same word might have different meanings in different social contexts. Therefore the designing of IT, that, unlike other technologies, is also represented even by the sphere of language and has to take into account this gap because in computer language each sign has a specific and single meaning and it is characterised by a rigidity that does not permit it to represent all the meanings that are typical of social interactions. This rigidity might suggest some difficulties in implementing technologies such as artificial intelligence (AI) and expert systems. In fact, even though they may represent wide aspects of subjects' cognitive processes, AI and expert systems are bound by using a formal language. For this reason, probably, it might be more effective if information systems, instead of reproducing subjects' cognitive processes as AI and expert systems, support interactions and the development of meanings among subjects.

Not only the structural approach but also the phenomenological approach may suggest some hints in designing technologies and IT. In fact it points out that technologies and IT enter subjects' lives in three different ways: perception, circumspection and understanding. Whereas in the understanding way they are invisible, they might disappear from use and are taken for granted, in the remaining two

ways uses of technologies and IT face some obstacles. In fact in the perception way they are considered a whole of characteristics and structures but are not integrated in the wider social and technical context. Technologies and IT are not conceived in terms of their potentiality and their use is uncompleted and partial. In the circumspection way, even though they are not completely integrated in subjects' routines as in the understanding way, technologies and IT are implemented in the work practices. There is a continuous clash between subjects' skills, routines and technical instruments. Breakdowns and implementation problems characterise this way in which technologies and IT enter subjects' lives.

Therefore the designing of IT should consider the difficulties in reaching the understanding way. In this proposal it might be necessary to build an environment around users that permits subjects to perceive potentialities of these technologies by a specific training for example. Breakdowns and implementation problems are normal effects in using technologies, but their planning should consider these aspects. In fact one task of designers is to foresee breakdowns and implementation problems, considering not only technical issues but also users' habits and characteristics.

The phenomenological approach suggests a further consideration for designing technologies and IT. In fact they should not be considered as elements cut off from the environment in which they are used, but as a ring of a chain; as components of a whole of procedures driven by the purpose of developing a specific task. It is the execution of a specific task that shapes a mechanism in which technologies are elements. For example, installations, energy, and procedures all form this mechanism. Therefore the design of technologies and IT should consider the execution of a specific task in its complexity and adapt them to the context formed by interconnections between technologies and procedures according to their functions and characteristics.

As has already been quoted, a purpose of the phenomenological approach is to analyse how subjects make sense of technologies. In fact technologies and IT are defined as means and capabilities at subjects' disposal to pursue projects. Subjects conceive them as instruments that are part of a wider context formed by a social context with its rules, characteristics, values, habits, etc. Therefore projects are not only the result of the understanding of social contexts and of capabilities to act on that understanding, but are also the result of instruments at our disposal.

In this proposal the design of technologies and IT should consider these aspects. In fact they might be used and conceived differently according to different social contexts. Moreover subjects might interpret the same context in different ways because each of us pursues our own projects even though we share a specific social environment. As a result of this, technologies and IT might be interpreted differently and designers should be aware of this, if their implementation does not correspond to their forecast.

Chapter 4

Social brokers: players for mediating participation in political and institutional systems

4.1.1From government to "good governance"

In simple terms, government can be seen as the sum of public bodies in charge of: 1) providing services to citizens and companies; 2) planning and policy implementation and 3) organizing procedures and human resources in order to put into practice points 1) and 2) (Ciborra, 1993). However, this definition does not take into consideration the fact that new actors are involved in the management of public goods. The term governance (Kooiman, 1999; UNDP, 1997) is used to represent a situation whereby both planning and policy implementation, on the one hand, and service provision, on the other hand, pursue an active role in non public actors. The so-called public-private partnerships serve as examples in this proposal.

To define governance as "good governance" (UNDP, 1997) is particularly useful for the purpose of this case, as it underlines the role played by an environment in which the social, political and economic priorities are shared to a large extent by that of society.

4.1.2"Good governance" and ICT

The focus, now, is to see how the introduction of information and communication technology (ICT) has modified this discourse. In other words, has the e-government phenomenon been influenced by new forms of governance and by "good governance"?

So far, ICT has been introduced in the sphere of public administration for supporting activities represented by points 1) and 3) mentioned above. The so-called front office (point 1), and the back office (point 3) have been objects of significant investment and many applications have been introduced following the efficiency rationale. This managerial perspective has significantly contributed to the introduction of ICT in the sphere of public administration.

Focusing on governance and mainly on "good governance" implies a diverse approach for developing e-government. In this case, public administration is just one player, albeit the most important one, to the introduction of ICT and the managerial perspective is integrated by other perspectives that take into consideration such elements as legitimacy, accountability, justice and participation.

This new trend has emerged in recent years, and issues raised by "good governance" have been objects of interest in the field of e-government. In particular, the introduction of ICT has been considered promising for improving the exercise of democratic processes and political participation. However, it seems to view citizens as indistinct subjects, and offers them a tool with which to participate in social and political activities. There is the impression that the main issue is to design devices which are able to support participation and that citizens will naturally take advantage of them. Nevertheless, this is not always the case. The potential of ICT to favour this activity is unquestionable, even though it is organized primarily in a collective way and not by individuals. Political parties and trade unions are the typical examples of organizations through which participation takes place in the political arena. From this perspective, the objective is to consider citizens as members of a network of social relationships rather than as individuals. This requires seeing citizens as potential actors not only in organizations like political parties or trade unions but also in cultural, voluntary, trade associations, sport clubs, charities, and parishes etc. In this way, the focus shifts from citizens towards organizations and institutions which give form to the so called civil society.

4.2The electronic identification management (eIDM) issue

Interacting with public administrations through the internet can require users' identification. In fact, in order to have access to specific services, users are obliged to identify themselves and this occurs, particularly, in case of e-filing, when even important documents are the object of transmission. In this situation, a controversial issue concerns the modalities to carry out this identification. The Tax Agency, the National Institute of Social Insurance and the Chambers of Commerce adopt their own solutions for this proposal. Therefore, the objective, here, is to briefly outline the main questions that these public bodies have considered for guaranteeing users' identification.

Bindingness, confidentiality and protection from identity abuses are deemed the main elements to investigate identification issues (BSI, 2004). Bindingness represents the legal validity of a document or a transaction, confidentiality concerns the privacy of electronic communications, and protection from identity abuses, which involves the mistreatment of authentication mechanisms by third parties.

Therefore, the eIDM concerns the appropriate combination of all three elements to build a favourable environment for gaining access to electronic services.

In order to investigate this combination, firstly, the instruments for generating a legal obligation are taken into consideration. Citizens, civil servants and public bodies expect that electronically managed dossiers are equally valid and legitimate (BSI, FhI-SIT, NOVOSEC, 2004) and this is obtainable by identifying both the sender and the receiver of the communication, and by guaranteeing the integrity of its content. On the basis of these elements, enacted transactions are not subject to repudiation. The second aspect concerns privacy, which means that, the message content cannot be rendered viable to unrelated actors. From this perspective, it is crucial that the object of transmission arrives at the correct address. The concern then, moves to the protection from identity abuses of the counterparts involved in a transaction. In other words, it is necessary to prevent public administrations from providing services to ineligible users, and legislation can be imputed to unaware citizens.

Another element is increasingly becoming important: citizen-friendliness. In Italy, this is no longer an ethical prerequisite for providing electronic services as it has been the object of legal regulation. In particular, public administrations are obliged to give equal opportunity to any person to have access to e-government services. This law was conceived specifically in order not to marginalise the disabled from the opportunities provided by the so-called information society. Of course, electronic identification is part of this discourse as it can be seen to be a necessary step in using these services. On the other hand, it is difficult to define citizen-friendliness. The Italian law singles out some principles like content accessibility, use easiness, user efficacy and users' satisfaction as the main points on which to construct a citizen-friendliness services. To sum up, an eIDM that only combines the appropriate bindingness, confidentiality and protection from identity abuses does not fit with citizen-friendliness. This, of course, constitutes in a further element that impacts the identification issue.

4.3The proliferation of the internet in Italy

In order to examine the difficulties for a country such as Italy to introduce a system like eparticipation, it is useful to include data to outline the scale of internet use among citizens.

Citizens and in particular families have been the object of a specific survey (ISTAT, 2006). Despite 46.1% of families owning a personal computer, only 35.6% are connected to the internet and more than half of families have a narrowband connection (dial-up and Isdn). The same survey points out that more than 60% of families have no connection to the internet, almost 40% of them consider it to

be redundant or of no interest. Furthermore, 30% do not have a sufficient digital literacy, 12% have access from alternative sources, and 9% judge this service too expensive. The remainder relate to issues of disability, privacy and dangerous content.

Despite this data, in 2006, 98% of the population who lived in urban areas (more than 500 inhabitants per km square) had broadband connection (DSL, cable and fibre optic) available but this percentage rose to 84% in suburban areas (from 100 to 500 inhabitants per km square) and to only 46% in rural areas (less than 100 inhabitants per km square). Data at a national level is 88% (Osservatorio Banda Larga - Between, 2006). This situation shows a significant gap between accessing a broadband connection and its actual use. Of course, the use of e-filing systems is affected by various circumstances, for example the exchange of document greatly benefits from the availability of a broadband connection. Further data confirms this fact. In 2006, if we consider people who had access to the internet, at least once in a period of three months, 38.8% of them required information from a public administration Website. 27.2% downloaded forms and only 13.3% had not only downloaded forms but had also sent them back electronically (ISTAT, 2006). Regarding the reasons for preventing citizens taking advantage of e-government services, more than half of them preferred to have a relationship in-person with public administrations. Indeed, about 17% maintained that the range of services provided was insufficient and not user-friendly. A similar percentage worried about security and privacy issues, 14.9% considered services not user-friendly and only 3.1% mentioned the cost question to have access to e-government services (ISTAT, 2006).

The scenario outlined by this survey illustrates the series of factors that thwart the proliferation of e-government systems among citizens. In particular, it emerges that it is not only a technical problem related to the quality of communication infrastructures or the inadequacies of public administration Websites, but also a problem that involves several factors, such as the level of digital literacy, habits and established practices and how they interact with local governments, and questions of security and privacy.

Data related specifically to the use of e-participation systems are not available. However, significant insights can be collated which relate to the use of more general e-government services that, in Italy, at least, unsatisfactory even though not in all cases as we will see later.

Concerning companies, some preliminary remarks are required. Updated statistics are only available for those companies with more than 10 employees, whereas for companies with less than 10 employees it is necessary to go back to 2002. In this proposal, it is important to underline the fact

that, in 2005, 95% of companies had less than 10 employees, employing 47% of the total number of employees (ISTAT, 2007). This means that the role of these companies is relevant in the Italian economic system.

In 2006 96.4% of companies with more than 10 employees had, at least, a personal computer connected to the internet (ISTAT, 2006). In stark contrast to 2006, of those companies in 2002 with less than 10 employees, only 53.8% of companies had a personal computer. Data concerning internet connection is unavailable. However, it is possible to assume that this data has changed considerably in the meantime. In fact, such proliferation levels which characterise companies with more than 10 employees is not unthinkable. The latter interacts electronically with public administrations: 81% requires information, 79.3% download forms, 53.2% download and re-send them electronically and 39.3% executes entire administrative procedures on-line (ISTAT, 2006). However, it emerges from the same survey that a higher propensity by larger companies take advantage of on-line services provided by public administrations. This suggests that smaller companies are still inclined to operate in traditional ways. To sum up, the characteristic of the Italian economic systems typified by a large number of so-called micro companies is an obstacle for the proliferation of systems such as e-filing. Currently both human and financial resources are not in place to meet such technological innovation.

4.4Mapping the network of Civil Society

The objective is to see how the social and political life of a specific territory is organized. In other words, to detect the different forms through which community activities takes place identifying those nodes which citizens use to meet and interact. Nodes are places that represent a point of reference for citizens and are considered appropriated for pressing social needs, for example. Therefore, the focus is to map out such places, to outline the cruxes that constitute the backbone of the social and political life of a specific community.

At the basis of this mapping process there is the idea that these nodes can act as mediators between citizens and social and political systems. So, it is necessary now to outline these mediators and their characteristics. Boissevain's work (1974) is helpful in this proposal. Mediators do not have at their disposal first order resources (land, funds, specialized knowledge etc.) but second order resources (strategic contacts with people who control first order resources). They are social brokers and as such are experts in networking. They bridge the gaps in relationships between people, groups, structures and even cultures favouring the exchanges of information and services among them. Social brokers are points of reference for a specific network because of several factors such as expertise, knowledge,

and charismatic influence but also fortuitous circumstances. For example, they exist in places where people stop, talk, pass on information and meet regularly. In this respect, café-owners are a good example.

Even though the availability of first order resources is not crucial, this contributes to determining a power position that facilitates brokers' operations. Reputation is another factor that characterizes social brokers. It takes time to acquire this status and it is based on continuous effort to act in a reliable, credible, trustworthy and responsible way.

A social broker can be an individual but also a supra-individual entity (group or organization) and three main kinds can be identified: 'advisor', 'guarantor' and 'entrepreneur' (Coleman, 1990). Actually, Coleman does not refer specifically to social brokers but to intermediaries in trust. Nevertheless, an overlapping of meanings between these two concepts is significant and this classification can be considered valid, even for investigating social brokers. The 'advisor' bases its mediation on judgment. That is to say, mediation takes place because the judgment of a third part is sufficient for establishing a relationship between the two separated parts. In the case of the 'guarantor', the object of mediation between these two separated parts is not related to each other, but it is the third part that is answerable to the content and the nature of the established connection. The same is valid for the 'entrepreneur', even though, in this case, its role is also to rearrange the nature and the content of the mediation. Political parties and trade unions are 'entrepreneurs', for example, as they mediate between citizens and workers, on the one side, and the institutional system and employers' association, on the other side.

Nevertheless, in this paper, mediators do not act in the same way as political parties and trade unions. As it has been mentioned before, political parties are just an example as, usually, they are responsible for transferring issues from society to the political arena but also for revising and imbuing them with values. On the one hand parties adopt a specific perspective on the issue at stake, on the other hand, brokers are mostly seen as neutral on this point and perceived only as facilitators for supporting citizens entering into the political system. This means that not only 'entrepreneurs' but also 'advisors' can be helpful for mapping out those nodes through which community activities take place.

To identify such nodes as branches of political parties belonging to a specific community is relatively easy, but this form of political activity is considered to be in crisis leading to the transformation of mass parties into professional-electoral parties. These parties characterize themselves because of not being settled diffusely on the territory (Panebianco, 1988). Therefore, in order to outline the social

and political life of a specific community, it is necessary to turn to a diverse kind of mediator, mediators that are not only dedicated to political representation as branches of parties but also constitute points of aggregation for those citizens who are able to develop connections to the political and institutional system.

At this point it is necessary to introduce a series of instruments to map out those actors that can play the role of mediation between citizens and the political and institutional system through the support of ICT.

The concept of social capital (Putnam 1993 among others) and trust (Fukuyama 1995 among others) can be useful for detecting the nature of these communities according to the mapping of places for social and political participation. However, other possibilities to pursue this objective come from the concepts of access points (Giddens, 1990), trust spreaders (Mutti, 1998b), trustworthy cues (Bacharach and Gambetta, 2001), and institutional carriers (Scott, 2001).

4.4.1Access points

The concepts of 'differentiation' and 'functional specialization' has been used in order to point out the passage from the pre-modern traditional world and modernity. Modern times have been exemplified by evolutionary processes toward fragmented societies where actors play specific and distinct roles. Nevertheless, Giddens (1990) proposed a further concept: disembedding. The fact that interactions circumscribed to a local context have been ousted by those in which time and space borders typical of pre-modern societies have been crossed significantly is not represented properly by concepts that presume an evolutionary process and a functionalist perspective. The disembedding concept suggests an idea of modernity in which space and time are aligned in a more diverse way than before rather than in continuity. Velocity and instability characterize it and this concept in some way emphasizes this situation. A situation in which symbolic tokens and expert systems acquire a relevant role as disembedding mechanisms. Among symbolic tokens, means through which transactions and interactions take place without requiring any particular acquaintance between involved actors, money is fundamental. It enlarges the space and time span as credits and debits enable transactions otherwise not possible. Even expert systems contribute to enlarge the space and time span and then disembedding. These systems can be represented by knowledge related to a specific social or material environment. Giddens (1990) suggests that even when we sit down on our sofa in front of the TV we are surrounded by a series of expert systems that are related to the operability of the electric system, the statics of the house etc. Laymen are usually slightly aware of the characteristics of these systems

even though they are continuously plugged into them and modernity is based on the proliferation of these systems. Therefore, access points to these are crucial if a person decides to lead a normal life in the society. Access points are entities which are in charge of expert systems and, at the same time, constitute the interface with the so-called laymen. Relationships between access points and laymen can be characterized by standardization and formality but also by friendship and personal connection. Nevertheless, what really matters is the possibility to reassure layman about both the competence of access points, knowledge and expertise present into related expert systems. This is the reason why these points are tense places, where a sense of reassurance is vulnerable and negative experiences dealing with access points could lead to an expert system crisis.

Political and institutional systems are, without any doubt, expert systems. Therefore, the point, here, is to see, if a concept like access point can be helpful for outlining, in a specific community, those nodes which are able to favour active participation in political and social life.

4.4.2Trust Spreaders

The analysis of the concept of trust spreaders or trust propagators (Mutti, 1998b; Mutti, 2003) requires the introduction of the concept of trust. However, it is not an objective of this paper to study in detail a much debated concept such as this. The aim here is to sketch the discourse that leads to the concept of trust spreaders.

Trust can be defined as an expectation of positive experiences lived by actors in a situation of uncertainty. This is due to an emotive and cognitive lift that permits to overcome the threshold of the simple hope (Mutti, 1998a). If the addresses of expectations based on trust are individuals we face the so-called interpersonal trust, on the other hand, if the addresses are institutions, we face a so-called institutional trust. Moreover, according to the range of addresses, trust is either focused or general in nature. The former (focused trust) is dedicated to specific individuals and institutions. The latter (general trust) is dedicated to the strict circle of social links reaching unrelated people and distant institutional systems.

According to Inglehart (1997), modern times characterizes itself by the imposing of anti-authoritarian post-modern values based on individuals' self-fulfilling and the pursuit of quality of life. All of this leads to an increase of mistrust toward hierarchical institutions and traditional forms of authority. In this scenario, the level of general trust is subject to contrasting forces and the widespread decline of focused trust towards a wide range of institutions.

In order to remedy this situation, Mutti (1998b; 2003) proposes an indirect path. That is, to think about the chains of focused and interpersonal trust, through the mediation of trust spreaders, in order to build a presupposition for large scale forms of cooperation. In this discourse, the crucial element is represented by trust spreaders and on their capability to multiply trust. Trust spreaders are individuals (relatives, friends, acquaintances and experts etc.) and public and private institutions (professional associations, independent authorities and local agencies etc.) that already enjoy trust and, because of this, can certify the trustworthiness of other individual and institutions. This is due to the fact that cognitive and emotional uncertainty concerning the latter is reduced favouring relationships based on the trust of other actors.

If we now turn to the classification of social brokers proposed by Coleman (1990), trust spreaders seem to share characteristics of 'advisors' rather than of 'guarantors' or 'entrepreneurs'. They certify to new actors the good reputation acquired elsewhere of trustful individuals and institutions through the circulation of existing information and the strengthening of the acquired trustworthiness.

Moreover, Mutti (1998b) introduces a trust spreaders classification. At first there are individuals that propagate interpersonal trust. Experts, friends, relatives, lovers and charismatic leaders are examples in this case. Experts certify the status of actors on the basis of cognitive elements (competence, reputation and accountability etc.) whereas the status of actors concerning friends and relatives are certified primarily on the basis of emotional elements (morality, discretion and sensibility etc.). Then, there are individuals that propagate institutional trust. Giddens's access points can be seen from this perspective. They are experts who (in this case we consider access point individuals rather than institutions) favour the access to expert systems and their well functioning. Moving from individuals to institutions, there are those that support interpersonal trust. Big and prestigious companies, for example, render their personnel trust to customers and suppliers. Professional associations play the same role concerning their members. Finally, there are institutions that propagate institutional trust. These are the cases of independent authorities such as the World Bank and agencies like Moody and Standard and Poor which provide expert knowledge about currencies, markets, financial products and even entire countries.

Even though this classification is useful to investigate the characteristics of the political and social life of a specific community, an analysis of trust spreaders requires a case by case examination of what are their trust basis and the conditions through which the multiplication of trust takes place.

4.4.3Trustworthy cues

Always in the circle of trust, there is another concept that can be helpful for investigating the nodes of the social and political life of a specific community: the concept of trustworthy cues.

According to Gambetta and Hamill (2005) trust judgments are based on signs that mark these properties, and trustworthy cues are intended as these signs emitted, consciously or otherwise, by potential trustees and, in this discourse, by social brokers. Sztompka (1999) listed six types of trustworthy cues: performance, appearance, reputation, accountability, pre-commitment, and trust-inducing. Nevertheless, the point is now to focus on the aspects of communication. That is, the capacity to transmit trustworthy cues whatever they are. In fact, trust relationships can be built on a large numbers of elements even though factors like visibility, comprehensibility and salience contribute to creating an environment that favours their transmission (Smith, 2007).

These cues can be subdivided into direct and indirect (Kumlin, 2004). Direct ones are based on the fact that individuals experience personally their communication whereas in the case of indirect cues communication is mediated as it is derived from secondary sources. At this point, it is necessary to consider social brokers as indirect trustworthy cues. They can be seen as nodes which are able to make known information related to the credibility of cues of other entities. Therefore, to sum up, the analysis of the concept of trustworthy cues provide a further step in the study of social brokers and their role played in a community.

4.4.4Institutional carriers

Institutional carriers introduce another concept which has been greatly debated in the last few decades: the concept of the institution. Even in this case, only a few points are dedicated to this concept and to institutional carriers as helpful elements for investigating the nature of social brokers.

Scott (2003) is taken as a point of reference in order to outline both the discussion on institution and institutional carriers. "Institutions are social structures that have attained a high degree of resilience. They are composed of cultural-cognitive, normative, and regulative elements that, together with associated activities and resources, provide stability and meaning to social life (Scott, 2001:48)". The stability of social life is mainly based on three main 'pillars': regulative elements, normative elements and cultural-cognitive elements. Regulative elements stress the institutions' capacity to establish rules, surveillance mechanisms and sanctions. Normative elements emphasize the creation of expectations related to specific behaviours. That is, the emerging of norms and roles that constitute

morally governed and internalized social obligations. In the case of the cultural-cognitive pillar, the focus is posed on the taken-for-granted. In other words, on beliefs, shared concepts and the logics of action that underlie social order. It is rare to find institutions based only on a specific type of element whereas, normally, a combination of types prevails even though it is not excluded that some elements are dominant.

To focus on institutional changes means to throw light on elements that lead to innovation and variations on institutional processes rather than on behavioural conformity and structural isomorphism. Moreover, one cannot ignore the role of carriers that transport these elements. Therefore, institutional carriers can be defined as those vehicles that enable institutional elements to move from place to place and from time to time.

According to Scott (2003), these carriers can be classified as follows: symbolic systems, relational systems, routines, and artefacts. Symbolic systems represent those schemes through which information is coded and conveyed. Relational systems include both interpersonal and interorganizational linkages. Routines refer to patterned actions that, embedding tacit knowledge, can be, all the same, conveyed by actors and artefacts consist in material culture produced by humans to support task performance.

The point, now, is to see if social brokers can be interpreted through the lenses of institutional carriers. In this discourse, Scott (2003) examined, in particular, symbolic systems and relational systems. Among symbolic systems, interpretation seems apt to represent the social brokers' activities. In fact, interpretation consists of the process of decoding and encoding of ideas but also taking into consideration 'frames'. 'Frames' (Goffman, 1974) are interpretative schemas that simplify and condense the "world out there". This means that the 'frames' of the sender and of the recipient cannot coincide. Therefore, a successful transmission of ideas involves a frame alignment and one of the tasks of social brokers is to support communication between diverse entities. Following on from the ideas of Latour (1986), Czarniawska and Joerges (1996) maintain that the flow of ideas needs to be 'translated' rather than 'transmitted' underling another aspect of the role played by carriers. Moreover, information technologies can play a crucial role in this translation process because of the possibility of storage, reproduction, and the dissemination of information.

Concerning relational systems as institutional carrier, Scott (2003) underlines the role of intermediaries. That is, go-betweens that neither are producers nor users of ideas but transmit and

market them. It is evident to consider social brokers as intermediaries even though they are not seen as neutral but active factors shaping and reconstructing ideas.

To conclude, this has been a tentative analysis in order to see if social brokers can be interpreted according to the perspective proposed by the concept of the institutional carrier. Nevertheless, a series of questions have not been taken into consideration. For example, what sort of institutional elements (regulative elements, normative elements and cultural-cognitive elements) can social brokers carry? Can participation be affected negatively if, as suggested by Scott's work, social brokers, for various reasons, are not neutral? From this perspective, what will be the role of information technology? And, finally, can social brokers effectively establish suitable and legitimate relationships between communities and political and institutional systems?

4.5 Social brokers and ICT: the telecentre example

The literature on development and ITC and in particular literature on telecentres (Madon, 2007; Roman and Colle, 2002; Delgadillo et al., 2002), has been taken into consideration in this analysis in order to investigate in more detail the role of social brokers as intermediaries between citizens and the political and institutional system through the support of ICT. Telecentres are usually described as those places where public connectivity to computers and networks are provided. They are disseminated throughout the world, however in Latin America, Africa and Asia these centres have been object of specific development projects. It is evident from these experiences that important insights emerge concerning the implementation of instruments for promoting participation supported by ICT.

Delgadillo et al. (2002) maintain that telecentres can be subdivided into community telecentres, cyber cafés or internet cafés and other connectivity services. Even though all of them provide public access to digital technologies, community telecentres characterise themselves because of the emphasis on social use. That is, the appropriation of the ITC tools and information that can be accessed through them from a social change perspective. Social encounters, interaction, learning, personal growth and the mobilization of efforts to address community needs and problems are supported by this kind of public access. Cyber cafés tend to be for-profit businesses, providing basic email, Web browsing, electronic games, and digital printing services, whereas the impact on social development is of secondary importance. It is the combination between computers, internet connection, emails and other related services which primarily characterise such public accesses. Other connectivity services are represented by school networks, government information services, electronic procurement and

bidding systems that represent only marginal aspects of public connectivity with computers and their networks.

It is clear from this classification that the example of community telecentres, rather than cyber cafés and other connectivity services, can be considered to be more useful for outlining a context supportive of social and political participation through ICT. Therefore, the question now concerns the elements which form the basis of these telecentres, in particular examining the experiences in developing countries and if these experiences, in some sense, can be transferred to the developed world, where accesss to computers and the internet is not considered a problem. And if all of this can be investigated through the theoretical framework presented in the previous paragraph.

Both Roman and Colle (2002) and Delgadillo et al. (2002) focus on a series of elements for achieving the sustainability of telecentres in a community. In this work, the objective is not to analyse in detail all these elements but to concentrate on those that contribute to outlining telecentres as places for improving social and political participation. This means that the connectivity and access issues that are still relevant in developing countries are not taken into consideration, for example. Therefore, it is evident that telecentres should not be only places for having access to computers and the internet but also points where traditional and non-electronic resources are available as well. For instance, they should have access to community information needs and the communication needs of other local organisations. They should attract volunteers, organise tutorial programs on centres' operations, constitute advisory groups for supporting users and establish links to other community organisations (Roman and Colle, 2002).

Users should be the core. In some sense, they are the owners of these centres, thus enabling them to tackle specific problems In this respect, it is crucial to plan and establish such centres in a way that they are integrated "with other spaces and communication activities that are already operating successfully within the community (Delgadillo et al. 2002, pp. 10)". It is this integration that constitutes the background from which issues related to several fields can be taken into consideration. New forms of neighbourhood organisation can be envisaged as the community mobilizes to make an impact on urban planning, community facilities and public services. Marginal groups in society have a chance to strengthen and defend their voices and community political clout can be enhanced through communication with local governments. In addition, forms of decentralisation can be envisioned as evidence of the strengthening of exchanges and collaborations with groups and networks within a community and also with other communities.

Community telecentres have been considered interesting experiences in order to support human development and significantly contribute to transforming and improving social conditions. However, to pursue this objective these centres have to be "rooted in the dynamics of local organisations and community action" (Delgadillo et al. 2002, pp. 26). Otherwise, they risk being transformed into computer centres for entertainment consumption like cyber cafés which lack a social vision.

The question, now, turns to the fact if the theoretical framework presented above through the concepts of access points (Giddens, 1990), trust spreaders (Mutti, 1998b), trustworthy cues (Bacharach and Gambetta, 2001), and institutional carriers (Scott, 2001) can be of some help for interpreting the characteristics of community telecentres. For example, can the community telecentres outlined above be considered access points? That is to say, do they share the characteristics of these points such as being able to manage expert systems and, at the same time, provide the interface with the so-called laymen? At first glance, the answer is affirmative. Community telecentres play the role of being an entity which introduces laymen to expert systems such as local governments, health care agency, and development agency etc. Furthermore, community telecentres are also trust spreaders as well. Trust spreaders have been considered individuals or institutions that certify the trustworthiness of other individuals and institutions because they already enjoy trust. These centres are effectively being integrated with other entities that are already operating successfully within the community, have the characteristics to play this role. Moving on to the possibility of community telecentres acting as instruments for communicating trustworthy cues, it seems that they demonstrate this characteristic as well. These centres can be considered nodes, which are able to release trustworthy information about third parties which favour community development. Finally, the focus moves on institutional carriers and the question is, can telecentres be seen as vehicles (symbolic systems, relational systems, routines, and artefacts) of institutional elements in space and time? Information translation rather than transmission, information decoding and encoding and the role of intermediary conveying and marketing ideas are, effectively, activities fulfilled by these centres.

Chapter 5

The role of social brokers in three Italian public bodies

Technology brings about profound capabilities for the development of mankind – and it has always been this way. The impossible becomes possible because of innovations in technology. The printing press, the internal-combustion engine, electricity and, more recently, information technology are just

few examples of innovations that have significantly contributed to the development of mankind. Technological innovations, particularly in information technology and the internet have overcome many of the constraints that have impacted our working lives in terms of such criteria as: time, place, actor and constellation (Normann, 2001). Such as, when and where things can be done, who does these things and with whom they can be done. Concerning the reconfiguration of social and economic activities, it is easy to guess the range of opportunities that this kind of technology can put forward. Consolidated processes, procedures, routines can be unbundled. Taking apart those activities which relate to time, place, actor and constellation constitutes a fundamental phenomenon which is enabled by information technology. But this technology characterizes itself not only for the unbundling aspects but also for the rebundling ones. What was difficult to connect because of distance, financial resources, lack of communication etc. can be refixed in several solutions.

The two phenomena of unbundling and rebundling, introduces the question of e-services. E-services can be seen as the final result of unbundling and rebundling. Services provided in traditional ways are completely reshaped because of information technology. The internet allows us to have access to a series of services on-line from our desktop. The constraints of space and time are overcome.

To be more accurate, e-services can be subdivided into two big families: e-commerce and e-government. Even though the meaning of these two terms is quite broad, the objective here is to distinguish those e-services which relate to the private circle and those e-services which relate to the public circle. Of course, e-government is the term used to represent e-services in the public circle and, e-filing and e-participation firmly resides in this circle.

5.1Social brokers and e-filing at the Italian Tax Agency

From a methodological point of view, this research study is set in the circle of multiple case studies. Namely, three public bodies, the Tax Agency, the National Institute of Social Insurance and the Chambers of Commerce are examined in order to compare adopted governance forms for introducing an e-filing system. In particular, the research method used can be defined as literal replication (Yin, 2003). From this perspective, case studies are selected on the basis of their resemblance rather then their diversity. In fact, despite differences between the three case studies under examination, e-filing systems adopted share common points, such as the fact that we are talking about big public bodies with millions of users and also documents, which are objects of electronic transmission are of a similar nature. Moreover, a user overlapping takes place. This is when the user maintains relationships with all the three bodies under examination. All of this enables the investigation of the

common characteristics of the cases looking for significant results in the implementation of modalities in the e-filing system.

Any case study has to be investigated in the same way. At first, time series concerning the use of e-filing has been collected in order to analyze the emerging trends. This is followed by, the so called, grey literature for studying the main characteristics. Finally the e-filing functions and modalities through which the services are provided have been taken into consideration. A dozen interviews have been submitted to personnel, of the three public bodies, and to users for examining the processes undertaken to introduce these three e-filing systems.

5.2E-filing at the Tax Agency

In Italy, companies are obliged to submit tax returns in such instances of profit and loss. However, it is not the same for citizens. In cases of incomes lower than 3,000 euros, for example, citizens are wavered from paying tax submissions, and other tax exemptions exist. Here, the employer is in charge of the employee's tax return submission. Moreover, employees and retired people (the self-employed and entrepreneurs are excluded) can submit to a simplified tax return to the Tax Agency when revenue sources are not only related to employment income. As it is analyzed in detail below, these two categories can take advantage of specific tax assistance centres in order to draw up and submit tax returns.

All of this process is governed by the Italian Tax Agency. Prior to reforms that took place in 1997, this agency characterized itself by the (EU, 2006):

- 12 tax-return handling centres swamped with a backlog of 20,000,000 cases to administer (it took 5 years to check tax returns);
- 44,000,000 paper forms to be managed;
- 3,200,000 tax litigation pending cases.

Reforms which pertained two different perspectives. The legal one consisted of the introduction of tax return forms that unified some of the tax duties and, because of it, the number of income tax returns have been reduced. The organizational perspective concerned the reorganization of the Ministry of Finance. Tax Agencies, subdivided into revenue, customs, territory and state property, were constituted enjoying a relative organizational, financial and managerial autonomy. Finally, information technology was introduced. The so called Fisco Telematico groups together with

information infrastructures and applications were adopted, and within this, the e-filing system plays an important role.

The e-filing system at the Italian Tax Agency is subdivided into Fisco Online, Entratel and Siatel. Fisco On-line is the web site zone dedicated to citizens. This zone offers a series of on-line services that consent to complete large part of the paperwork of this Agency. Entratel, on the other hand, is dedicated to intermediaries (professional accountants, tax assistance centres, trade associations, banks etc) and, concerning services, it does not differentiate itself significantly from Fisco Online even though there are more formalities in order to acquire access to it. Finally, Siatel is reserved for public administrations (communes, provinces, health agencies, hospitals, judicial offices, universities etc.) for having access to the tax register.

Different phases characterize the development of Fisco Telematico. From 1998 onwards, tax assistance centres took advantage of this e-filing system for delivering tax returns, while professionals and big companies started using this system from 1999. In 2000, even citizens and small to medium sized enterprises can have access to this system through the internet (Fisco Online) whereas in the previous cases data transfer is based on a dedicated extranet (Entratel). From 2002, even tax payment is available through this system.

The impact of the introduction of Fisco Telematico can be summarised as follows (EU, 2006):

- 10 tax return handling centres have been closed since 2001, and the remaining 2 have been restructured releasing 400,000 square meters of accommodation;
- the elimination of data acquisition costs and backlog since 2000;
- the on-going reduction of 6,000 human resources (at present the total workforce amounts to 36,000 employees).

The investment required for reaching these results has been conspicuous and amounts to 93.5 million euros subdivided into 51.5 million in technology costs (hardware, software, telecommunications etc.), 17 millions in reorganization costs (mainly external consulting services), 14 million in labour costs (incentives for staff involved in paper backlog elimination and compensations for staff who are transferred to other offices because of the closure of tax return handling centres) and 11 million in human resources training.

On the other hand, cost savings have been calculated in a similar measure amounting to 90 million euros based on the closure of 10 tax return handling centres (20 million), the elimination of data acquisition costs (30 million) and a reduction in the workforce of 6,000 employees (40 million).

The subdivision of an e-filing system into Fisco Online, Entratel and Siatel has facilitated access to diverse categories of users. In addition, this Agency has been flexible opting for the compulsory method for submitting tax returns and other documents, always after a significant period of time, only for intermediaries (Entratel) and some public administrations (Siatel). On the other hand, some incentives, like the postponement of return submissions for example, were introduced for encouraging the paperless mode instead of the traditional method based on paper.

The completion of an on-line return is not the same as the completion of traditional modalities. Of course, it is possible to take advantage of automatic calculation controls or help procedures. Moreover, the risk of incurring mistakes is reduced, and in a very short space of time, it is possible to know if the completed tax return has been successful. Nevertheless, it is necessary to follow specific courses of action in order to manage files properly for permitting their electronic mailing. This means that the nature and form of interaction models are changing, leading to an increase of complexity. However, this is true only if we consider the tax payers' perspective. As it was mentioned above, the introduction of Fisco Telematico was to the determinant of reducing human resources and assets dedicated to tax return management, this signalled a reduction of the complexity dimension, concerning the Tax Agency. Besides, positive side effects are not only restricted to the tax return management but are also felt in other areas. Formal controls were reduced sharply, the workforce could be transferred to sectors where it is more needed, and the prompt availability of data concerning the amount of tax collection can be used for fine tuning tax policies or even macroeconomic policies at a national level. These are just few examples for outlining the range of results obtained due to the introduction of the e-filing system.

Even though the increasing complexity depicts a scenario characterised by some obstacles for the transition from the traditional method of operating to the on-line one, this shifting has been considerable as indicated by table n. 2 and table n. 3. In a few years, the totality of returns have been filed electronically even though data shows clearly that the large majority of them have been managed by mediators through Entratel. Data issued by the Tax Agency in 2005 show that only 149,738 taxpayers took advantage of Fisco Online (the system dedicated to citizens and Small and Medium Enterprises) for filing individual tax returns. The remainder have been sent by tax agency offices spread all over the country which account for a total of 958,726 tax returns. This data is not dissimilar

to the 2004 data in table n. 1 in which submissions totalled to 858.445. However, this data requires more elaboration. In fact, taxpayers who use simplified tax returns (see above) do not have at their disposal the on-line modality (Fisconline) which is available exclusively to normal tax returns. In this case, they have to turn to mediators either for tax return control and its electronic transmission (free of charge) or for the drawing up and complete electronic transmission (fee-paying). The simplified version of returns provides advantages for the submission of documents, tax calculation and the possibility of tax reimbursements directly from the employer or the social insurance system, as in the case of pensions. Regarding table n.1 and table n.2, they are characterized by the columns "Entries" and "Effectively Reached". The former indicates the number of transmissions executed by the Tax Agency, whereas the latter indicates those transmissions that are effectively reached. In the table n.2 the number of entries is considerably lower due to the fact that each entry corresponds to a large number of returns, as the senders perform the role of mediators in these instances. Other data issued in 2005 indicates that 2,393,814 are returns sent by banks and post offices. These returns were hand written by tax payers and then digitalised by organisations as the Tax Agency accepts only on-line completion. Of course, banks and post offices are remunerated because of the execution of this task.

All of this is a clear indicator of the difficulties faced by tax payers to take advantage in-person of the electronic filing system because of the burdens placed on tax payers such as the collection of tax documents, the calculation of the amount to pay to the tax agency plus the complexity for managing electronic files. The final result is that the large majority of returns are filed by mediators and the rest by taxpayers by the traditional method or by the support of the revenue agency offices.

Type of document	Entries	Effectively Reached Entries		Effectively Reached	
		2001		2004	
Individual income tax return	398,683	370,921	883,197	858,445	
Partnership income tax return	5,290	4,940	13,279	12,724	
Joint-stock income tax return	6,272	5,894	11,380	11,065	
Non-profit income tax return	1,414	1,072	1,714	1,620	

Table n. 1: Returns sent to the Tax Agency in 2001 and 2006 through Fisco Online (Source: Italian Tax Agency)

Type of document	Entries	Effectively	Entries	Effectively
		Reached		

		1998		Reached
				2004
Simplified individual income tax return	3,812	6,545,194	16,262	15,130,893
Individual income tax return	1,064	1,057,905	1,187,785	10,470,146
Partnership income tax return	569	14,150	274,599	1,070,891
Joint-stock income tax return	89	1,856	365,779	1,005,015
Non-profit organization income tax return	33	117	82,477	161,738

Table n. 2: Returns sent to the Tax Agency in 1998 and 2006 through Entratel (Source: Italian Tax Agency)

The Tax Agency can be considered a typical organization in which hierarchical governing prevails. In fact, it is a public body connected to the Ministry of Economy and Finance and established according to a specific law. Its functioning is based on legal and administrative instruments and even relationships with taxpayers are based on these principles. The introduction of the e-filing system has followed the same rules. As it can be seen above, intermediaries and other public administrations, even after a significant period of time, have been forced to use the on-line modality.

The point, now, is to investigate the mode that determined a situation in which taxpayers and companies turn to mediators to file returns. Let's start from the latter. Companies, because of their size (the Italian economic system is based on Small and Medium Enterprises) tend to externalise tax duties to professionals. Normally, only big companies have offices that complete all obligations concerning accountancy and tax obligations.

Turning our attention back to the structural level, self-governing is the mode that generally rules interactions between companies and professionals for filing tax returns. The former buys this service on the market and, generally, the match between supply and demand fixes the price of this service. In the case of citizens, the same is valid for individual tax returns but not for simplified individual tax returns, as taxpayers do not buy this service on a market in which the match between supply and demand fix prices. What happens is that the Tax Agency, in some sense, supports the market providing incentives to intermediaries for advising taxpayers, offering about 14 euros for the drawing up and filing of any simplified tax return. This fee does not cover the service provided, however, it contributes to minimise the taxpayers' burden. This means that a pure self-governing mode is not the mode that governs the drawing up and filing of simplified individual tax returns because of the presence of this incentive.

Moreover mediators are in charge of the validation of returns so tax payers run less of a risk to submit incomplete or incorrect returns, and the Tax Agency acquires accurate documentation on-line rendering more efficient back office operations, as can be seen above. Concerning the on-line submissions, this agency acknowledges to the intermediaries a further small fee of 0,5 euro.

Concerning relationships between the Tax Agency and mediators they are regulated by the self-governing mode. In fact, intermediaries are free to enter into this market even though is not only governed solely by market forces because of the support provided by the Tax Agency for simplified individual tax returns.

The Tax Agency has become a collection centre for taxes and contributions. Taxpayers, through this agency, do not only pay taxes but also a series of other contributions payable to the National Institute of Social Insurance and Communes for example. Then, electronically, the Tax Agency transfers sums to the respective remittees. This contributes to simplifying the taxpayers' responsibilities.

So far, it has been used as the generic term of mediators and professionals for defining actors in charge of filing tax returns on behalf of taxpayers. The objective, now, is to elaborate further on the characteristics of these mediators. A simple classification can distinguish traditional figures like professional accountants, and lawyers, and trade associations that do bookkeeping and tax advising on behalf of their members, tax assistance centres and finally banks and post offices. Banks and post offices are only in charge of the digitalisation of tax returns submitted on paper, whereas the role played by tax assistance centres requires more specifications.

Only trade associations and trade unions can establish these centres, because of a specific law. The reason for this is that the spirit of this law was to find agencies that are equipped to manage simplified tax returns and the introduction of e-filing, on the one hand, and to open up the market to tax advice, on the other hand. In this way, established organisations like trade associations and trade unions could form specific centres for supporting their members and also for competing in this market.

The effect of the introduction of this law suggests that it is possible to define these centres as access points (Giddens, 1990) or trust spreaders (Mutti, 1998), for example. Trade associations and trade unions have played a role in the access points or trust spreaders through the establishment of tax assistance centres. Taxpayers who were not used to requiring services provided by traditional professions have new opportunities to have access to this kind of service because of their proximity to institutions like trade unions and trade associations. In a situation like this the introduction of an e-filing system is favoured. The Tax Agency, on the basis of the role played by these centres, was in a

situation to introduce on-line modality with a reasonable expectation of success, which effectively happened. In some sense, the categories of employees and retired people, experience many difficulties in managing taxation issues, and have often been directed to tax assistance centres for support, on the one hand, and to facilitate the process of e-filing, on the other hand.

The so called meta-governance (Kooiman, 1999) concerns levels of social acceptability and legitimacy leading us to reflect on the social costs inherent to the introduction of this electronic system.

Data presented at the beginning of this paragraph show important results obtained by the Tax Agency due to the introduction of the e-filing system and other interventions. However, meta-governance puts into question if these impressive results have been obtained with no costs bore by other actors involved in this system.

Actually, the introduction of the e-filing system provoked a decrease of this dimension regarding the Tax Agency but it was not the same for taxpayers. The latter, on the contrary, suffered an increase in complexity as it was subjected to the on-line modality and it is possible to assume the same for mediators as their task is not only to draw up returns but also to file them on-line to the Tax Agency. An increase in complexity is also due to electronic identification. Both the on-line procedure and the over-the-counter procedure involve a series of operations that are more complicated than signing. Concerning bindingness, confidentiality and protection from identity abuses, the solution adopted by the Tax Agency seems appropriate. Moreover, the nature of the documents transmitted are not subjected to abuses. However what can be underlined, is that the on-line identification proposed by Fisco Online can be subject to misuse as the data necessary to obtain password and PIN are not only available to the tax payer or his/her family members. Apart from this, the combination of bindingness, confidentiality and protection is considered appropriate, and even the level of citizen-friendliness can be considered satisfying due to the relative simplicity of using instruments like a password and PIN, so much so that they are increasingly diffused among internet users.

From this perspective, it is possible to assume that the cost of this complexity due both to the execution of procedures and users' identification is transferred to taxpayers. However, it is not always like this. In the case of the simplified individual tax returns, the Tax Agency intervenes to reimburse to mediators a specific sum for each return submitted.

To sum up, benefits obtained by the Tax Agency due to the introduction of the e-filing system have been only partially transferred to taxpayers who, individually, have to bear the large part of the cost of its introduction.

The digital divide is another issue that concerns meta-governance. In large, remote areas of Italy do not have broadband connectivity, therefore, the necessary uploads and downloads required for the functioning of e-filing systems is rendered extremely difficult. On the other hand, the role played by mediators significantly reduces this issue, and the diffusion of Tax Agency branches at Commune premises could be another answer to this issue.

5.3E-filing at the National Institute of Social Insurance

Similarly to the Tax Agency, in the case of the National Institute of Social Insurance, the e-filing system is subdivided into different areas but they can be traced back to three main parts: "for the citizen"; "for public bodies"; and "for businesses, consultants and professionals" which refers significantly to Fisco On-line, Siatel and Entratel, respectively.

5.3.1"For the citizen"

To have access to "for the citizen" a PIN is required and an online modality is available in order to acquire access. It is sufficient to communicate the user's tax code and his/her personal information to obtain some of the digits of the PIN, which are delivered immediately, whereas the rest are sent by mail as in the case of Fisco Online. Areas accessible through users' PINs are characterized by the https protocol for protecting client and server communication from intrusions.

"For the citizen" provides a series of services. Data concerning users' contributory life are available, statements of social security contributions can be downloaded and applications for services or benefits can be submitted. The latter is particularly interesting to this piece of research.

In fact, in order to apply for these services or benefits electronically it is necessary to have installed Acrobat Reader version 5.1 on the users' computer. This version, and the following ones support electronic signature. In order to affix this signature, self-certification of users' IDs are required. A self-certification based on the indication of personal information, reference organization, and email address etc. that enables the validation of these applications. Therefore, once a specific form has been selected, filled up in its different parts, confirmed and filed, the electronic signature will be automatically assigned. Then, mechanically, a message of the National Institute of Social Insurance

will be delivered in the electronic mail box indicated by the sender, recording the protocol number of the document received. At this point, the Institute takes into consideration this document, and can accept or reject it, pending this decision; the applicant is informed through email. However, the final process takes place as a consequence of a phone call from the Institute for controlling all the different aspects of the application.

The following table shows the number of PIN issued by the National Institute of Social Insurance (PIN refers both to "for the citizen", "for public bodies" and "for businesses, consultants and professionals"), and the data related to the use of some services of "for the citizen" in the last years.

	2001	2002	2003	2004	2005
Number of PIN issued	N/A	401,025	1,085,798	1,392,085	1,782,018
"for the citizen" services	2001	2002	2003	2004	2005
Security contribution	About 800,000	2,307,401	3,838,869	5,745,652	7,127,487
statements					
Enrolment of house	N/A	256,245	791,345	N/A	N/A
servants					
Enrolment of para-	N/A	3,507	69,326	N/A	N/A
employees					
Pension and salary	N/A	343,790	4,515,273	6,856,256	9,650,470
statements					

Table n. 3: Number of PIN issued and data concerning the use of "for the citizen" from 2001 to 2005 (Source: National Institute of Social Insurance)

5.3.2"For public bodies"

In the "for public bodies" area, several services are available. However, in this case, we are taking into consideration, principally, e-filing between the National Institute of Social Insurance and municipalities. This is due to the importance of the electronic transmissions between these two bodies.

Concerning modalities that have access to "for public bodies", there are similarities with Siatel. Even in this case, users are authorized, for privacy reason, to have access only to specific areas related to their role in the Municipality in which they belong to and under the supervision of the mayor or law officers.

Similarly to Siatel, municipalities are always in charge of updating the Institute data bases concerning births, deaths and address changes both of payers of social security contributions and beneficiaries of pensions and other benefits. Contextually, municipalities collaborate with the Institute for implementing social policies. Two of them are of particular interest as they are supported by electronic transmission of documents. They concern allowances for large families in precarious economic conditions, and maternity benefits for mothers who are not eligible of allowances as employees. In these cases, Municipalities prepare documentation that is sent electronically to the Institute that, in turn, pays the beneficiaries. The adoption of e-filing in this case is considered to be relevant, as this form of collaboration is not based on a legal command that instructs municipalities to

use e-filing, but on a sort of moral suasion undertaken by the Institute towards the development of this modality, even though laws suggests this solution. Nevertheless, results have been satisfactory, as in the Institute's local branches, which if we take into consideration the totality of procedures are supported electronically.

But collaborations between the Institute and Municipalities do not stop at the implementation of social policies. In fact, the latter constitutes a network of front offices where citizens can have access to take advantage of a series of services provided by the Institute. Services which are specifically available are those ones of the "for the citizen" area.. The Institute provides a platform in which the personnel of the Municipalities, who duly trained, provide these services because of an agreement.

It is a fact that the services provided by the internet through the "for the citizen" area are also available through different means, which constitutes a so-called multi-channel solution in which the same services are accessible through a call centre, intermediaries (benevolent funds, tax assistance centres, professionals, trade associations etc.) and self-service kiosks.

The table n.4 outlines the use of "for public bodies" area concerning some specific services, however, the first two entries concern only municipalities, and the last one regroups electronic transmissions provided by intermediaries.

"for public bodies"	2002	2003	2004	2005
Services (Security contribution	N/A	1,035,606	1,284,094	1,432,140
statements, Pension and salary statements etc.) provided through municipalities				
Payment executions for	670,240	438,400	579,841	585,619
allowances and benefits				
Economic condition statements	2,201,423	2,838,918	4,124,672	4,153,126

Table n. 4: data concerning the use of "for public bodies" from 2002 and 2005 (Source: National Institute of Social Insurance)

5.3.3"For businesses, consultants and professionals"

In this case, Entratel can be useful to introduce the "for businesses, consultants and professionals" area. As it is possible to guess, this area is dedicated to companies and their intermediaries in order to interact with the National Institute of Social Insurance.

Companies are compelled to submit, every month, a return in which information concerning employees' salaries and related security contributions are to be paid to the Institute are indicated. The possibility to electronically send them is advantageous as data process and even fund transfer can be mechanized. Even though this service was available from 2001, it was only made mandatory in 2005, when a large proportion of return submissions had already been sent electronically. In the meantime, in order to promote the use of "for businesses, consultants and professionals" among companies and intermediaries, the Institute acknowledges a deadline extension for submitting these returns; even though a payment due date had not been postponed.

Modalities to access the "for businesses, consultants and professionals" closely follows the Entratel ones. Even in this case, only the "at the desk" solution is available on the basis of the identification of the company's legal representative, and the signing of a statement in which she/he accepts the responsibility of truthfulness of data and information submitted electronically. Then, a PIN is issued. The same procedure applies to intermediaries.

This had been the situation up until the beginning of 2005 when a new security contribution return, sent monthly, was introduced. Whereas the return presented above, regroups data and information of all employees together, the latter singles out salaries and related security contributions for any

employee. Of course, in this case, the amount of data and information to process are considerably more relevant, however, the adoption of this new procedure has been considered a success by the Institute. Even in this case, only the online transmission is available and in the 2005 Institute Annual Report, it emerged that 2,000,000 declarations were mailed electronically, a total of 98,000,000 company monthly returns have been delivered.

Table n. 5 exemplifies the increase of security contributions returns sent electronically from 2001 to 2005.

"for businesses,	2001	2002	2003	2004	2005
consultants, and					
professionals"					
Security contributions	About 2,100,000	8,265,527	11,782,175	17,108,64	17,855,665
				2	

Table n. 5: data concerning the use of "for businesses, consultants, and professionals" from 2001 and 2005 (Source: National Institute of Social Insurance)

5.3.4The governance of e-filing at the National Institute of Social Insurance

The National Institute of Social Insurance Annual Reports continue to underline the importance of the introduction of information technology for supporting its functioning and results already achieved in the e-filing sectors. The main objective of the above paragraph was to represent these results in different circles of activities whereas now the objective is to focus on the governance adopted by the Institute for achieving them..

E-filing has meant a new way for delivering services as with the "for the citizen" area, and the possibility of making available further access points to services by means of municipalities and intermediaries, but also the provision of completely new services as in the case of allowances for large families and maternity benefits for mothers not employed. This constitutes an enlargement of Institute tasks and the electronic transmission of documents and information plays an important role. Besides, the subdivision of the e-filing platform into "for the citizen", "for public bodies" and "for businesses, consultants, and professionals" according to different users and also the identification issue has been addressed in the same way similarly to the Tax Agency case.

The contrast of special and common interests drove the Institute to introduce a mandatory solution for e-filing documents which relates to security contribution. However, this move was a conspicuous period of time after its introduction, and when a large number of companies and intermediaries

already used this solution. A similar method has been adopted by the Institute toward municipalities. Here, a kind of moral principal and specific training has enabled a significant adoption of this electronic solution.

The question of complexity closely follows what has emerged in the instance of the Tax Agency. On the one hand, the Institute has experienced a reduction of the level of complexity due to the introduction of e-filing, on the other hand, users have supported an increase in complexity because of procedures necessary to manage the electronic transmission of documents. Even the identification issue implies an increase of complexity for the users' side. A simple signature validates a document that requires a more complex course of action through e-filing.

The question is, then, to see if the vision followed by the National Institute of Social Insurance introducing e-filing determined a reorganization to such an extent that actors at the basis of the interaction management have been involved as well.

In the "for the citizen" area, the Institute merely provides a further channel to have access to services. This means that users are free to take advantage of services over-the-counter, but also at municipalities, tax assistance centres, benevolent funds and self-service kiosks. In this way a further possibility for having access to the Institute's services is provided.

In the case of "for public bodies", both the Institute and public bodies are regulated by the law. This would suggest the existence of hierarchical governing controls interactions between them, but this is not the case. If we take into consideration relationships between the Institute and municipalities for the provision of services related to allowances for large families and maternity benefits, the law provides a series of modalities through which documents can be transmitted. In this understanding, even though the Institute's influence clearly emerges on the implementation of this e-filing system, at the same time there is space for negotiating and finding a reciprocal arrangement. And this was what effectively took place. The Institute developed a policy for inducing municipalities to adopt the on line solution, not only on the basis of law provisions but also lobbying the advantages of e-filing and providing adequate training to the municipality personnel involved.

In other cases, legal provisions are far more pressing. For example, municipalities have been obliged to update the Institute's data base regarding deaths and the beneficiaries' changes of address. On the other hand, this data base has been rendered available for dealing with dossiers in charge of municipalities. This means that co-governing modes contribute to represent the structure of interactions that have taken place, due to the introduction of e-filing in the "public bodies" area.

Concerning "for businesses, consultants and professionals" it has been taken into consideration mainly because of the transmission of security contributions, and in its more detailed form, which was introduced in 2005. From 2001, until the year the e-filing system was introduced, in 2005, businesses, consultants and professionals have even been free to adopt the traditional solution. However, in this scenario, the Institute introduced incentives, such as the postponement of a deadline for the sending of security return contributions, and effectively this policy has been rewarded as the adoption of the electronic solution establishes itself step by step.

In contrast to Fisco Online where the data available assigns exactly the number of electronic transmissions executed by any specific actor, as in the case of the National Institute of Social Insurance this data is not available. For example, we know that, in 2005, 7,127,487 security contribution statements have been issued electronically, but how many of them were acquired by citizens on-line, or by municipalities, tax assistance centres and benevolent funds? How many have been issued by self-service kiosks? Nevertheless, from the Institute's 2003 Annual Report, it emerged that among 32 million of services delivered on-line, 5 million were those delivered to or on behalf of citizens, 12 million to companies and 15 million to public bodies, tax assistance centres and benevolent funds. From this data, it is possible to affirm that the Institute experiences a situation similar to that of the Tax Agency in which intermediaries play a fundamental role in the development of e-filing. In addition, at the heart of the diffusion of access points to the Institute's services, there is a specific strategy that sees municipalities and other intermediaries as instruments to spread services widely.

This strategy has important effects on the Meta-governance level and particularly on the digital divide issue. The possibility to have access to a large proportion of the dedicated services to payers of social security contributions and pension beneficiaries, and other benefits in any of the 5,000 municipalities can be considered a significant result. Moreover, the same services are available at the tax assistance centres and benevolent funds. All of this marks a difference in comparison to the Tax Agency, as only some municipalities deliver its services.

The question of social acceptability and legitimacy that are posed by meta-governance touches even the Institute. In the case of the Tax Agency, this question has been caused, mainly, by the complexity dimension inherent in the introduction of e-filing. A similar evolution is valid for the National Institute of Social Insurance as well. Indeed, in this case, only companies and intermediaries are more affected by the increase in complexity. Security contribution returns, that constitute the majority of electronic transmissions, do not see the involvement of employees and pension beneficiaries, and

other benefits, but only of companies and intermediaries. This contributes to restrict the range of the complexity question.

Similarly, in the instance of the Tax Agency, the identification of users is another element that increases complexity. However, both modalities for obtaining the PIN and turning to the electronic signature provided by Acrobat Reader for applications and declarations can be seen as a sign toward user-friendliness in the context of a substantial equilibrium between bindingness, confidentiality and protection from identity abuses. This is mainly due to the telephone call made by the Institute, to applicants to control and approve the undertaken procedure, after it receives applications electronically.

To sum up, the Institute's reduction in complexity because of e-filing contrasts with an increase in complexity, in relation to companies and intermediaries. However, benefits like deadline extension for returned submissions have been awarded, and the electronic solution became mandatory four years after its introduction.

Concerning relationships with other public bodies and particularly Communes, agreements upon the introduction of e-filing has set the benchmark. Agreements and other forms of collaboration have been pursued even toward intermediaries through the Institute's supportive role for increasing the number of access points available for service provision.

5.4E-filing at Chambers of Commerce

Examining the Chambers of Commerce results in shifting the emphasis in this analysis. In fact, both Fisco Online and "For the Citizen" are dedicated to a significant proportion of the population, whereas Telemaco, the platform at the centre of online services provided by the Chambers of Commerce, is devoted specifically to companies. Therefore, it is similar to the Tax Office Entratel and "for businesses, consultants and professionals" of the National Institute of Social Insurance. Telemaco is an information system that is common to all Chambers (each Province has its own Chamber and, at present, in Italy, there are 103 Provinces, but new Chambers will be established in the next few years) for providing services related to the certification of a company's existence, its characteristics and generally the publicizing of information related to companies.

Moreover, Telemaco, in comparison with other platforms examined so far, is more interactive. Not only does it support the electronic mailing of forms, but it provides data base access to the Chambers Registers and the possibility of obtaining certificates, balance sheets and other official documents

related to the life of companies and their administrators. However, in this instance, particular attention will be focused on the balance sheet deposit as all stock companies are obliged to do this annually. FeDra, Bilanci On-Line, and Bilanci PDF are the three applications, always integrated into Telemaco, and dedicated to this proposal (Agostini, Resca, 2006).

A user-id and a password is sufficient to gain access to Telemaco. Sending a specific application form or delivering it to the counter of the competent Chamber, detailing the applicant's personal information and highly confidential information of the company. This immediately activates the user-id at the specified email address in the application form, whilst the password will be sent by normal mail. Telemaco adopts the protocol https for governing interactions with users.

As part of the services provided by the Chambers are subject to administrative fees and tariffs, Telemaco differentiates itself because of its ability to pay these charges electronically. Users build up a credit line via a credit card, which will be used automatically according to the services which have been provided.

If the users' user-id and password are necessary to obtain documents and acts already deposited, it is not the same when documents and acts have to be deposited. The reason for this is due to the fact that these documents are subject to a digitalisation process, and to a digital signature. Indeed, FeDra, Bilanci On-Line e Bilanci PDF have been introduced mainly for implementing this procedure.

5.4.1Fedra

FeDra is a software that can be downloaded, for free, from the InfoCamere website (InfoCamere is a consortium constituted by the 103 Chambers in charge of the communication network that connects all of them) and it enables the drawing up of a series of documents in order to get them ready for the electronic mailing or a deposit at over the counter through a digital support. However, in this research, only the balance sheet deposit is the object of particular analysis.

Firstly, this procedure provides information for identifying the company and the characteristics of the balance sheet deposit. Then, there is the question of document digitalization of balance sheets, minutes of shareholders' meeting and other documents which must be the original documents. The transformation of original documents into a PDF or TIF file format is considered sufficient for this proposal. At this point FeDra provides a list of all documents to be deposited and supports the digital signature by a smart card both on this list, and on listed documents themselves.

Three solutions are possible concerning who effectively signs these documents. These solutions are shared by Bilanci On-Line and Bilanci PDF. The first one sees the subscription of the person in charge, such as the owner, or the legal representative of a company who, equipped with his/her own smart cart, digitally signs the documents. In the second solution, the so-called qualified professionals are the protagonists. On behalf of the person in charge, professionals (lawyers, accountants, etc.), equipped with a smart cart, and on the basis of a mandate, sanction this course of action. The third solution is based on the power of attorney. In particular, two kinds of power have been implemented. The first one is based on a permanent power of attorney granted by proxy, which, on the basis of a private deed deposited in the competent Chamber, is entitled to the procurement of acts. In the second one, the power of attorney is limited to a specific execution. This power is based on a private deed that has to be digitalized and enclosed in other documents to be deposited, and all of them will be signed digitally by proxy.

A further step can be seen if we now evaluate the Telemaco system. Here, documents are managed, to prepare them to be sent electronically and for paying due fees and tariffs. Automatically, senders receive a notification of delivery from Chambers but only later the delivery is validated.

5.4.2Bilanci On-Line

Bilanci On-line does not require to download a specific software for managing balance sheets and other document deposits. The procedure can be carried out directly on the web, even though not all procedures enabled by FeDra are available. For example, Bilanci On-line does not support eventual changes in the shareholders' list. Of course, digitalization and the digital signature of original documents persist, and their grouping in a specific folder of users' computer. However, the uploading of these document folders to deliver takes place at the end of the web procedure once companies and administrators are identified, the delivery procedure digitally signed and the nature of documents to deliver have already been indicated.

5.4.3Bilanci PDF

Bilanci PDF characterizes itself because of the use of advanced functionalities provided by Acrobat Reader. The 6.0 version and the software versions which followed, enable the possibility to prepare a single file that regroups both the documents to deposit, and the list that collects them.

However, documents have to be digitalized and signed digitally, at first, as in the previous cases. Then, five main steps can summarise the Bilanci PDF procedure. The first one controls the presence of the Acrobat 6.0 version or a following one. The downloading of the electronic dossier on the user's computer represents the second step, whereas the third enables access to the Chamber's data base for drawing up automatically company and administrator identification information. The introduction of digitalized document in this dossier represents the fourth step, and finally it is necessary to turn to Telemaco for the electronic mailing and payment of due fees and tariffs.

5.4.4The governance of e-filing at Chambers of Commerce

The law n.340 implemented in 2000, provides the use of e-filing, or for the deposit, through digital support, in case of any statement, declaration and application required to Chambers one year later the coming into force of the present law. Only one-man businesses and the non-profit sector are excluded from this provision. Indeed, this directive became effective on the 1st July 2003, one and half years later than was initially anticipated. As in the case of the National Institute of Social Insurance, specific data on the use of this e-filing system by companies and intermediaries is not available. However, from conducting interviews, a similar trend emerges, which can also be seen in the other two case studies. Namely, the important role played by intermediaries in the execution of e-filing, because of the propensity of small to medium sized companies to externalize these kinds of tasks.

From this perspective, the objective, now, is to examine this fact. A state in which Chambers can, on the one hand, acquire data, information and documents on-line from companies and, on the other hand, deliver certificates, surveys and information to companies on-line.

Different modalities have been adopted by Chambers to alter the digital signature of documents by smart card (of the holder of the smart card). This is possible because of a specific mandate to qualified professionals, or through a permanent or limited power of attorney: the delegate can sign digitally and deliver electronically on behalf of the principal. However, not all of the Chambers have adopted the limited power solution, rendering the e-filing system to be more complex. Balance sheets can be deposited through FeDra, Bilanci On-line and Bilanci PDF. In this way, according to users' needs, Chambers provides a range of solutions.

It is interesting the fact that the provision of the law for the compulsory adoption of the on-line modality has not been observed. The opposition of users and particularly of intermediaries due to the difficulties to adopt this e-filing system has been so strong, that an extension of its introduction has been introduced.

The analysis of the governance complexity is more articulate. On one hand, the possibility to obtain certificates, data and surveys on-line can be considered an important point in favour of the reduction in complexity. In this way, companies and intermediaries, through the internet, can have substantial access, to the same services available over the counter. On the other hand, document submission and particularly balance sheet deposits have seen a significant increase of complexity. It is almost banal to underline the greater complication to digitalize documents and, then, to prepare them for the electronic delivery. This phenomenon emerged also in the case of the Tax Agency, and in the instance of the National Institute of Social Insurance. However, a further source of complexity in the Chambers case remains the issue of identification. To use a smart card rather than a password or a PIN implicates a significant increase of complexity.

Nevertheless, this is the scenario from the company and intermediary perspective whereas a completely different one characterizes Chambers. Indeed, the reduction in complexity is relevant to both receiving and delivering information, documents and surveys and this was confirmed by interviewed actors who emphasised how, the long queues at the counter had suddenly disappeared.

The fact that a specific law regulates the e-filing system introduction and assigns a specific data for its compulsory use suggests the directive mode through which this system has been implemented. Nevertheless, the legal provision concerning its launch was not applied. Therefore, we can suppose that even forms of co-governing contributed to the introduction of Telemaco.

Now we turn to Meta-governance, to examine the social acceptability and legitimacy aspects means to turn to Meta-governance. It has previously been mentioned the impact on the governance complexity due to the introduction of the e-filing system, and its consequences on the users. In this proposal, it is possible to state that this negative effect is supported almost completely by companies. Of course, intermediaries are subject as well to this phenomenon, nevertheless, they can transfer this burden to companies by charging a higher remuneration for their services.

In comparison to the Tax Agency, and the National Institute of Social Insurance, Chambers have not provided significant incentives for stimulating the adoption of the e-filing system, even though users can enjoy a reduction in administrative fees.

Moreover, the issue of complexity creates another issue: the issue of the users' electronic identification. The mandatory use of the digital signature by smart card for the balance sheet deposits not only implicates an increase in the level of complexity, but also undermines the equilibrium between bindingness, confidentiality and protection from identity abuses. The digital signature

supports a high level of bindingness, but it is subject to identity abuses. Whereas solutions adopted both by the Tax Agency, and the National Institute of Social Insurance, based on PINs, can be used only for executing a specific service, that is, through the PIN of the Tax Agency, it is only possible to have access to its e-filing system, in the case of the digital signature by smart card, this "heavy" mechanism can be used in any transaction by the holder. Therefore, losses or thefts of cards can create significant problems when misused. Moreover, the high level of bindingness guaranteed by the digital signature is not strictly necessary, as documents involved in transmission at Chambers are not signalled out for abuse, as they are generally released into the public domain.

Both complexity and the risk of identity abuse negatively influence citizen-friendliness contributing to outlining a scenario in which the users main support social costs raised by the introduction of this e-filing system. However, it has to be underlined that the digital signature by smart is required only for the deposit of balance sheets, and not for other services where an identification through user-id and password is sufficient. Moreover, smart cards are multi-tasking instruments, usable in different circumstances: they do not only support the digital signature.

Finally, meta-governance introduces the digital divide issue. It differs from the Tax Agency, and the National Institute of Social Insurance as Chambers have not been active for increasing the number of access points to its services. In this proposal, we have no information regarding the development of agreements with other public bodies in order to render their services more accessible to users. Nevertheless, the possibility to obtain, on line, a large proportion of certificates, documents and surveys provided is not a negligible result.

5.5Final considerations

The introduction of an e-filing system in these three Italian public bodies can be considered a success. Tax returns, security contribution returns and balance sheets, that are fundamental documents for the functioning of these bodies, are acquired electronically, enabling considerable advantages in their management. Advantages can be seen from another perspective: the perspective of the users. E-filing overcomes the constraints of space and time, and an internet connection is needed to take advantage of it.

Nevertheless, a specific type of users plays a preponderant role: intermediaries. In all three cases there has emerged a large majority of documents which are not delivered electronically by tax payers or companies, but by professional accountants, tax assistance centres, trade associations, and banks

etc. Therefore, we wonder if this is the main reason why such e-filing systems have been successfully

introduced.

It is hard to say for certain, but elements collected can be of some help to answer this question. First

of all, intermediaries are in essence the same in all the three cases under examination. This

contributes to building an environment in which the e-filing innovation becomes common knowledge,

which significantly favours its introduction. The Tax Agency and the National Institute of Social

Insurance then pursued a specific strategy in order to increase the role of intermediaries. For example,

the Tax Agency supports financial tax assistance centres for the drawing up and delivery of simplified

individual income tax returns. The National Institute of Social Insurance has developed significant

forms of collaboration with Communes for multiplying the number of access points to its services.

At this point another question can be posed. Is it possible to maintain that the singling out of access

points that favour and mediate the entrance to an e-filing system is determinant to facilitate its

adoption? There is not enough sufficient evidence to back this position, and further research is

necessary to investigate in more detail on this point.

However, there are negative points that need to be addressed. The Meta-governance level highlights

how the benefits achieved by the Tax Agency, the National Institute of Social Insurance and the

Chambers of Commerce incurred costs which were then shouldered by the users. In the course of the

research, we had the impression that there is not a complete awareness of this issue. On the contrary,

it is believed that the introduction of an e-filing system engenders only positive aspects as it provides

a new channel to access the services provided.

Chapter 6

Participation: what is it?

6.1What is participation?

To study participation is not an easy task. Participation can be seen as a combination both of

individual aspects and institutional and organizational aspects. It is a partial viewpoint that one to

focus only on participants or on institutions and organizations through which participation takes

place. Besides, participation represents a determinant aspect of democracy. The nature of a

democracy is strictly connected to participation characteristics. Therefore, three levels contribute to

outline participation: the individual level, the institutional/organizational level and the level related to

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democratic procedures. Toniolo (2007) defines participation and particularly political participation as the act of participating (individual level) in a process in which individuals, groups and organizations (institutional/organizational level) are consulted for have the opportunity to become actively involved in a project or a programme (level of democratic processes). Besides, Toniolo's work is at the basis of this analysis of participation.

To participate is to take part, to be engaged in a process or act, a decision making process for example (individual level) but it concerns a membership, as well, in an organism, group or community that involves a sense of solidarity (institutional/organizational level). These two parts are strictly connected. To be member means to be engaged and to be engaged means to be member. You can be engaged in a specific activity only if you are member and this is the reason why membership is seen as a pre-condition of participation. However, participation acquires its full connotation if we consider the level of democratic procedures as well. Who participates is not an undistinguished individual but a sovereign citizen who through his/her consensus legitimises a specific political regime, for example.

6.2What is participation used for?

Participation legitimises political decisions (level of democratic procedures). Besides, it is possible to outline other uses related to instrumental participation and to symbolic participation. Instrumental participation emphasizes the pursuit of an aim and the satisfaction of personal interests or specific ideals (individual level). The selection of political personnel during elections can be seen in this perspective. In this case, there is the awareness that, in consequence of a vote to a party, specific interests or ideals will be followed. Instrumental participation does not exclude a direct involvement of individuals. Nevertheless, it characterises especially symbolic participation.

This participation form is more difficult to outline appropriately. Here, it acquires values in itself. In other words, to participate has an effect in the society at large. Civic virtues increase and citizens are encouraged to be more informed and committed on public issues. In some sense, participation develops participation as, inherently, enables a formative function. Symbolic participation is not only the results of indistinct subject who behaves supporting the affirmation of civic virtues. Symbolic participation nurtures also membership and affiliation. A sense of unity emerges among participants and toward the outside world (institutional/organizational level) as it is a congenital element of participation to be against something.

To sum up, in any act of participation there is always a combination of instrumental and symbolic elements to whom correspond intrinsic benefits (symbolic participation) and extrinsic benefits

(instrumental participation). Intrinsic benefits are represented by the sense of solidarity enjoyed in a specific context or by recognising himself/herself as a standard-bearer of a particular ideal. Concerning extrinsic benefits, they derive from the protection of specific interests or personal advantages due to participation activities.

6.3What participation is not

In order to throw more light on participation it can be useful to see what participation is not. For this proposal, the area of action established since the 18th century between governors and who is governed, introduces the so called democratic participation. It is easy to guess that the characteristics of participation have changed significantly as time has passed by. This area of action was, at first, restricted and obstructed but then it has been continuously enlarged at least in the Western part of the world. Nevertheless, it is not sufficient to have the possibility to participate. To have proposals is fundamental as well. Proposals that are able to arouse participation through which to oppose contents and solutions imposed by rulers and, at the same time, create those conditions able to stimulate, provoke and vivify the will to participate. Therefore, participation is prevented in case of marginalization and political exclusion. In other words, rights do not provide for the legal ownership to intervene in political processes. Apathy, indifference and alienation are other elements that affect negatively the quality of participation. There is not interest and estrangement to public issues prevails. Another element that averts participation is the mobilization of citizens. This point requires a further investigation due to the fact that mobilization is an aspect that normally characterises it. Here, it is stressed the lack of autonomy and spontaneity and, on the other hand, the role of manipulation. Rulers can turn to activities that spur participation not in order to favour democratic processes but, on the contrary, to support specific stances related to their interest (Cotta, 1979).

6.4Five elements for outlining participation

This analysis of participation is about to go one step further taking into consideration five aspects that typify this phenomenon. The first one is related to the conditions that allow participation to take place. These conditions are seen as structures of opportunities based on a specific configuration of resources, institutional arrangements, and traditions of social mobilization (institutional/organizational level). In the absence of these structures, participation finds it difficult to affirm and, rather, at least in advanced democracies, both institutionalised and non-institutionalized channels of participation should be available. This is one of the main objectives of this work. That is,

to outline the characteristics of a specific territory concerning the opportunities for providing access to participation. However, the access is not the only problem. The level of income, the level of education and the quality and quantity of information available contribute to create such an environment favourable to actively participate (individual level).

The second aspect concerns directions of participation. In other words, what kind of influence power can be pursued by participation? Normally, it is directed to the selection of political personnel (polity-related), as in the case of elections, or to policy formulation and policy implementation (policy-related), as in the case of action protest against some specific policies. Recently, due to the affirmation of deliberative democracy procedures, problems of policy have drawn an increased attention and citizens have shown a particular interest in this kind of issues.

The range of results that can be followed participating outlines a further aspect of political participation and the continuum general-particular may represent it. Namely, the point is if a specific participation activity takes place in order to pursue common good or only specific interests. The latter has been defined with the term neo-corporatism (Schmitter, 1983) in which participation becomes instrumental for pursuing short term and particular benefits by a restrict numbers of social and political actors. This is in contrast to the former. Here participation is seen as a high profile activity in which it can also lead to the pursuing of wide scope aims as the modification of the existing balance of power or an activity of lobbying for favouring the enlargement of the participation level to new actors (i.e. immigrants).

Participants' commitment represents a further aspect. That it, how much money, how much time and how many efforts singular individuals dedicate to participation. Related to this there is the question to what prevent people to be active in participating. In this proposal, three main points come out: "they cannot", "they do not want" and "nobody asked them about it". Money, time and skills are not always available. Therefore, it is necessary to be motivated and to desire to be active in the social and political life. At the basis of this activism, there is the condition to be informed, to show interest on issues at stake and to be aware about results that can be reached participating. All of this contributes significantly to the level of participation. Finally, it is fundamental to be part of a network that stimulates, incites and mediates participation activity. This is seen as the main driver in the participation process rather than the socio-economic status or class-consciousness of citizens. In addition, the presence of networks had two important effects. The first one can be represented by an engine for developing civic skills. In some sense, they are schools where organizational and communication capacities are fostered. The second one outlines institutions and associations where

these engines are located and where citizens find an appropriate environment in order to internalize political and civil ideals.

The final aspect concerns conflicts. Any political participation involves aspects related to the raising or the accommodation of a conflict. So, conflicts compose the breeding ground in which participation takes place. Conflicts are characterized both by zero sum games and positive sum games. In both cases participation will be affected significantly as in the former gains of one party take place to the detriment to the other. Whereas, in the latter, a mutual benefit can be obtained. Nevertheless, to participate means, also, to take part and then, naturally, a distance toward other actors present in the social and political arena. Besides, conflicts do not only take place among participation actors but also inside a specific actor as the history of political parties confirms.

6.5Participation and democracy development: two intertwined ways.

Participation is considered a recent phenomenon. In fact, it is connected to two main transformations that have influenced the history of ideas, on the one hand, and the development of political institutions, on the other hand. Concerning the former, the world of ideas has developed in a way that individuals have become subjects of rights and as such they participate to the social and political life insomuch as all of this constitutes a basis of modern democracies. Therefore, activities related to dissent, disagreements, discussions and debates among individuals and groups, if placed in a framework of shared rules, are seen as signs of democratic vitality. They are a manifestation of popular sovereignty and as such a repository of authority.

A further indicator that outlines the effects of participation in the social life is related to the prevalence of individual choice rather than destiny. Traditions, family relationships and established social links due to birth situations have been superseded by social mobility both of individuals and groups.

Two main pillars are seen at the basis of contemporary democracies: personal freedom and representative political structures elected on the basis of vote right. The characteristics of these two elements contribute to outline the level of political development. An increased degree of participation can lead to critical situations if new demands that enter in the political arena are not coped with appropriately. Governability is at risk if an increase in the level of participation is contrasted with an increased capacity of the institutional level to manage new issues at stake. The capacity to set up organizations, procedures and political structures able to channel these new issues due to a wider participation is crucial. Particularly, two main elements are determinant for this proposal: the

institutional process (stability and legitimacy of organizations and procedures involved) and the problem solving process (institutional capacity to answer to raised demands). Misalignments in the functioning of democracies are not only caused by an increased level of participation but also by incapacity of the institutional system to cope with new situations due to red-tape problems, for example.

The development of democracy has been object of a considerable number of studies. Among them, Dahl (1971, 1998) sees two fundamental processes at the basis of this development. A process of liberalization, in which opposition rights, public demonstrations and the competition among rival political forces are guaranteed and a process of inclusiveness, in which portions continuously wider of the population are entitled of civil and political rights. According to these two dimensions, Dahl outlines a model for representing democracy development.

Rokkan (1970, 1999) focused on this development intertwining democracies with the level of participation. This interaction implies both a vertical process (how the political system reacts to change in the political arena) and a horizontal process (changes and variations in the possibility to articulate protest activity, social mobilization and the aggregation of political stances). Four different thresholds outline the interaction between democracy and the participation level on the basis of sociopolitical cleavages historically and institutionally determined: legitimation (recognition of political rights and civil liberties, incorporation (right of universal participation in elections), representation (possibility of new movements to be represented in national parliaments) and executive power (possibility of translation of parliamentary strengths in executive power) (Rokkan, 1970: 79).

Participation is strictly connected with the role of political parties. Historically, they have played a dual role. On the one hand, they represent requests coming from the society at large and, on the other hand, they are instruments for integrating and channelling these requests. The latter takes place also through a socialization process of party members. This process prevents that requests outside the borders of the political system enter in the political arena. In addition, parties are not neutral. They do not transmit instances raised by society but re-elaborate them. They select, aggregate, modify and sometimes manipulate requests emerging from the general public (Sartori, 1976).

This role of political parties can be seen, historically, according to three models (Manin, 1995): the model of parliamentarianism, the model of democracy of political parties and the model of democracy of the public. The former sees at the centre of the democratic process representatives who, in the parliaments, debate issues at stake and make decision accordingly. In this case, the role of

political parties is minimal due to the direct connection between representatives and voters even though, in this period, public opinion and its associations and movements become more influential. Democracy of the political parties represents the period of mass parties when the played a central role in the political arena. Voters do not select their own representatives but the "world" represented by these parties. They provide an identity and a vision to follow. Participation is experienced mainly through party membership rather than directly in the political arena. So, party militants are the protagonists of political and social participation of this period that lasted far over the end of WWII. The crisis of mass parties leads to the present situation defined by democracy of the public. Here, parties continue to have an important role but other actors emerge as well. Movements and associations have revitalised the public sphere once strictly controlled by parties. However, it is the singular individual the protagonist of this period. Giddens (1994) outlines the "reflexive actor" as the one who uses to filter information in order to take advantage of surrounding circumstances. In this situation, participation is volatile, contingent and based on an individualistic stance that put into question organized means of participation as parties and trade unions.

6.6Representative democracy and participatory (or direct) democracy: what is the role of participation?

Democracy is the general term used to represent those rules that define both modalities to access government posts and decision making processes that lead to laws and regulation valid for everyone. Nevertheless, this definition requires a further specification as a democratic regime characterizes itself also because of the capacity to solve, in a peaceful way, conflicts among members in the political arena and to be accountable and responsive toward voters.

In this context, political participation plays an important role. Participation is a sign of the quality of democracy and four indicators have been proposed for this proposal (Gallino, 1978): the type and level of it; its intensity and attendance; the range of decision making processes in which participation is provided for; the proportion of participants on the total of parties entitled.

Citizenship constitutes the background on which participation takes place. Citizenship outlines a series of rights (civil, political and social) that allow participation. But this is not sufficient. The exercise of these rights is fundamental. Therefore, what matters is the extent of who wants to participate rather than the extent of who can participate. In this regard, the willingness to participate is also related to the characteristics of the social fabric in which individuals are part. A social fabric with a high tendency to form associations, for example, favours the level of participation. The citizenship

issue acquires another perspective if we take into consideration minorities present in the political communities as immigrants or women. Here, the discourse becomes more articulated as effective rights to participate could not be exercised appropriately.

Finally, to keep in mind these points is useful in order to avoid typical pitfalls related to the participation discourse. Among these pitfalls, three looks like to be more recurrent. The first one is related to terminology. That is, it is important to clarify what is the matter related to participation. The second one is related to the ideal conceiving of participation rather than the real exercise of it and the third one, on the contrary, is related to an excessive attention to the effectiveness of participating.

Representative democracy and participatory (or direct) democracy involves the participation issue. In the former, participation is considered weak whereas, in the latter, it is considered strong. Only in the cases of participatory democracy, participation is considered authentic. Nevertheless, this point requires further investigations. First of all, the distinction between weak participation and strong participation can be considered naïve. In representative democracies, participation has an influence power. That is, conditions, vetoes and limits can be placed due to participation in order to put pressures on the government. Differently, in participatory democracies, participation consists in the direct involvement in the decision making process leading to co-decisions.

Rather than to focus on the distinction between representative democracy and participatory democracy, it is more useful to turn to historic experiences that see the affirmation of representative democracies integrated with forms of direct participation as referendums, petitions, primary elections, forms of tele-democracy, etc.

This scenario is summed up by three streams: the participatory stream, the liberal-representative stream and the stream of the deliberative democracy.

The former affirms that democracies are as such only if citizens participate directly to social and political activities establishing the political agenda up to decide which policies to implement in order to maximise their preferences. It is in this way that is possible to protect specific interests, to legitimise decision making processes and to integrate communities. Civic education is another aspect emphasized by the participatory stream as the diffusion of democratic principles in all parts of society.

The liberal-representative stream puts into question the basis of the participatory stream. Particularly, the question concerns the characteristics of citizens. They are conceived as "total citizens" who are involved in any aspect of social life threatening, paradoxically, in this way, the liberty of individuals

from the so established political power. In addition, the form of participation outlined by the participatory stream presumes that citizens have a lot of time to dedicate to the public life and that live in societies not significantly differentiated. That is, societies in which prevail strong communitarian links rather than pluralism and secularization that characterize modern societies. A further element put into question of the participatory stream is related to the size of the community entitled to participate. Only in case of small numbers, participation gains its authentic aspect otherwise the singular role of the citizen risks to vanish. Therefore, according to the liberal-representative stream, the representative democracy does not exclude direct forms of participation but see them as subordinated elements.

Nevertheless, representative democracies continue to confront themselves with the accountability and responsiveness issues. The gap between citizens and rulers continues to widen increasing disaffection to the public life. The deliberative democracy stream is seen as a possible answer to this situation. Citizens' juries, consensus conferences, deliberative polls and multi-stakeholder environmental partnerships are examples in this regard. What differentiates this stream from the participatory one is related to contents and acts of participating and arenas where they take place. Here, arenas are local. These deliberative procedures can effectively increase the influence on people's representatives but their range of action is limited. Nevertheless, if they focus on a specific policy and regroup stakeholders involved in it, traditional representative institutions could be obliged to make space to solutions elaborated in these contexts.

Who takes part and through which modalities are relevant aspects of deliberative democracy. It is expected that this form of democracy can lead, on the basis of rational discussions, to valid decisions that can go beyond established positions arranged in advance by parties involved as it happens normally in the decision making processes of representative democracies. Therefore, a series of functions can be ascribed to deliberative democracy mechanisms: a legitimating function (to reach a wider consensus), an instrumental function (better solutions), an education function and an expressive function (participants' accountability) (Raniolo, 2007). Even though all of these objectives are effectively attainable, drawbacks have not to be excluded. Over representation of some groups involved in the decision making processes, information manipulation and political agendas established by specific interests are phenomena that cannot be excluded influencing negatively democratic procedures. Therefore, deliberative democracy is effective if it plays a minor role in comparison with representative democracy even though it constitutes an effort toward a democracy of a better quality.

6.7Actors participating: interest groups and social movements

Political participation takes place not only on the basis of actions of singular individuals but also through collective actions. Collective actions imply individuals who have been, in some way, trained, who have been mobilized and are members of an organization. Social movements, political parties and interest groups are more common organizations through which participation is enacted. Even though singular individuals are seen as the keeper of the participation activity, in contemporary democracies relationships between public authorities and citizens are mediated by established organizations. It is through them that cooperative actions take place to pursue objectives that are not in the range of action of singular individuals. Besides, another important effect takes place inside these organizations: social differences present among organizational members are, in some sense, homogenized as organizational culture and values prevail on the culture and values of the society at large. Nevertheless, even though these inequalities can be managed, other forms of disparities are not excluded. The presences of oligarchies, excessive red-tape, and the professionalization of politics have influenced negatively both political parties and other interest groups and then the quality of democracy.

Interest groups (trade unions and trade associations, for instance) are organizations that promote and defend specific interests influencing public policies. Three main elements characterize themselves: an identity, a strategic action and resource mobilization.

The development of capitalism and the role of the public sphere, on the one hand, and the presence of civil and political rights, on the other hand, are the main elements at the basis of the development of interest groups. In this way, there are the conditions for an organized protection of interests through the possibility to legitimize rationality, congruence, imagine and sustainability of specific stances versus other stances present in the society (Fisichella, 1994). The fact that interests in modern societies are rather articulated leads to a fabric of interest groups outlining the power structure of society. Particularly, this fabric, recently, has been subject to transformations as the role of the state is becoming progressively important. More precisely, some groups are a direct result of public policies as, probably, they would not exist in their absence. New professions, for example, are as such because of state acknowledgement. It is this step that allows, then, the possibility to get organized. All of this contributes to create an environment in which the number of interest groups is considerable both on behalf of specific interests and general interests.

The distinction between interest groups and pressure groups leads to the strategic action element. Peer groups distinguish themselves because of the possibility to influence public decisions and leaders' selections due to sanctions and awards they can provide in consequence of their role in the society. Therefore, interest groups take action mainly at social level supporting specific stances. Differently, peer groups are active mainly at political level. Of course, a peer group is, at the same time, an interest group but the contrary is not always valid. Until the '50 the distinction between interest groups, political parties and institutions was rather clear. However, things have changed afterwards. The crisis of mass parties and the progressive increase of society fragmentation have caused an expansion of interest groups role. They are not only representatives of specific positions but also active in generating and even imposing them to their members. Besides, they range of action is increasing both in the polity-related questions (political personnel selection) and in the policy-related questions (from policy formulation to policy implementation).

The point now is to take into consideration resources that have to be mobilized in order to allow interest group activities. Two of them are determinants: authority and money. These elements require further specifications. Authority is represented by the level of legitimacy that a specific interest group has acquired, on the one hand, and rights and responsibilities that have been assigned to it in order to run a certain type of activity, on the other hand. Money is not only intended as financial resources available because of membership fees for example. Money, here, is seen also as information, knowledge and expertises to make available to the public sphere. A further strategy adopted in order to increase resources at disposal is based on cooperative relationships, rather than adversarial ones, with other interest groups. In this way, the influence power can be increased.

Three perspectives outline relationships interest groups and the public sphere: la pluralist perspective, the neo-corporatist perspective and the policy networks perspective. The pluralist perspective represents symmetric relationships among different interests at stake and policy-making is the result of a free competition. Neo-corporatism sees some protagonists and the rest of actors are, substantially, marginalized. In the Italian case, the main protagonists are government, trade unions and trade associations. The policy networks perspective, in some sense, is a third way. In specific sectors, policy-making is based on the presence of bureaucrats, politicians, experts and, of course, interest groups. Relationships among these actors can be structured, as in policy communities, or weak, as in the case of issue networks. If policy networks can be seen as instruments for enlarging the number of actors involved in the public sphere, on the other hand, the accountability issue can emerge. Who will be considered accountable for policies introduced in this way?

The last decades have shown not only the loss of importance of political parties but also of traditional interest groups mainly do to red-tape, power asymmetries and difficulties to have access to control rooms. It is in this context that social movements emerge. It is not easy to define movements. Less recent ones were associated to the work circle whereas recent ones to youth and ecological themes for example. They are marked by conflict and represent emerging stances coming from society. Nevertheless, four elements characterize movements (della Porta, Diani, 1997). The fact that they are based on not structured and informal organizations, that members share a sense of solidarity and common beliefs, that modalities of action are adversarial and that these actions turn to several forms of protest. If movement activities can, effectively, bring to a reforms and new laws and regulations, it depends to the characteristics of the political system. Specifically, the level of its openness to the level of legitimation reached. Voluntary associations, counterculture groups and local committees are a typical examples of movements and, in the long run, due to their inherent organizational instability, it is not excluded that they can transform themselves into full-blown institutions (interest groups and also political parties), service providers or as an environment for conviviality.

6.8Subjective elements and cultural elements of participation

What does it mean to participate? What elements define this activity? Being a political activist, being a member of an interest group, petitioning, organizing protest etc. (visible participation). But also, being informed about public life, showing interest to politicians' declarations and behaviours, following events in which political activities take place, etc. (invisible participation). Political science turned to psychology in order to investigate, mainly, invisible aspects of participation focusing on individuals' attitudes toward their involvement in public life (Almond and Powell, 1966). These attitudes are based on 1) knowledge about policies and politics; 2) affection related to specific political positions and orientations; 3) evaluation about political decisions and performances. Studies have shown that there is a connection between these three elements even though this consideration is not valid in all cases. Nevertheless, normally, an evaluation of a political event is also based on knowledge about it and subjective personal values, for example.

Another element that contributes to shape citizens' attitudes is political culture. Political culture can be intended as the whole of subjective orientations toward politics that, in turn, are the result of the individuals' socialization process, their level of education and their exposure to media. Three main political culture models have affirmed themselves as able to represent current political societies: civic culture, individualism and post-materialism and social capital. Civic culture is characterized by three

main elements: parochial culture (citizens are focused on local issues and not on national ones), subject culture (citizens are passive and tend only to look for personal favours) and participative culture (citizens actively participate to the public sphere). A mix of subjective culture and participative culture is what, substantially, characterize western societies. Nevertheless, post-materialist values imposed themselves mainly in the last decades. This means that material security, welfare, economic stability etc. have left more space to the quality of life, ecology and self-affirmation but also to participative democracy and direct intrusion in the political arena. This trend has been characterized also by a redirection of values. That is, from an attention to common aims and sociality to an attention to the self and the private sphere. The social capital emphasizes the characteristics of civic community. A diffused solidarity, trust, social commitment and reciprocity outline a context characterized by high social capital. On the other hand, if the stock of social capital is not consistent, interpersonal trust and institutional trust and then social and participation and collective actions are substituted by opportunistic behaviours, isolation and selfish attitudes.

6.9Mass media, information technology and participation

Just at the beginning of this chapter, it has been mentioned that three levels contribute to outline participation: the individual level, the institutional/organizational level and the level related to democratic procedures. Nevertheless, in the last decades it is emerged another element that contributes to take shape to participation: technology. Technology is a generic term and it has been introduced here because the advent of the internet has change significantly this scenario. Before, the interest of researchers was addressed to mass media (TV, radio and press) but now it is no more appropriate to use this term. Web sites, portals, social networks (Facebook, for example) and blogs are acquiring an increasing importance on politics and on participation as well. Therefore, the point, here, is to analyse the role both of mass media and information technology in the political life.

In the '40 and '50, first studies on mass media where dedicated to their impact on passive and active participation. Active participation represents the free will to be involved in the public life contributing to it through the implication in decision making processes and other related activities. Passive participation is seen as a non-participation and political apathy. A dilemma between narcotising dysfunction and opportunity expansion is the result of these studies. The former suggests a scenario in which mass media promote a passage from active participation to passive participation. On the other hand, the latter envisages a public opinion more informed and aware.

Italy is an example in this regard as a term like teledemocracy can become useful to describe Berlusconi's rise to power supported by a so called media party due to the role of his media in order to support his stances. Nevertheless, it cannot be forgotten a situation of a falling apart of the Italian party system at the beginning of the '90, the consequent delegitimisation of political leaders and the lack of a party able to represent positions of the political centre.

The influence of media in politics is mainly related to three main factors. The first one is related to changes in society at social-cultural level and to the technological development. Then, the increasing importance of mass communication and its legitimacy as a protagonist of the public life usually autonomous from the political control. Finally, transformations undergone by political parties and situations in which direct communications between parties and their electorate lose importance. In fact, political communication has been affected deeply by the advent of TV as main source of political information even though the internet is affecting deeply this scenario. Information production and diffusion due to multimedia supported by the internet are sensibly modifying relationships among citizens and between citizens and politicians. Interactivity enables a diverse way to establish these relationships both at horizontal level and vertical level. On the other hand, parties have changed as well. They are increasingly turning into electoral campaign organizations. Examples in this regard are the so called media parties and personal parties. They are not focused on the mobilization of followers but on the support of the public image of a specific leader or on issues that are appealing for the electorate. At the end, it looks like that the political class is experiencing a situation in which, on the one hand, media and new technologies provide a lot of opportunities for improving relationships with the electorate, on the other hand, these technologies have also their own way of functioning that can create obstacles for transferring specific contents to the electorate, for example.

Participation should be affect positively by the spreading of information technology. Any citizen has access to large quantity of information coming from innumerable sources. Information mediation has seen reduced its role, and political elites face more difficulties to affirm their own positions. In addition, this in not only valid at national level but also at world wide level insomuch as it is no more extravagant to talk about the presence of a global public opinion.

The term e-government suggests another aspect due to the introduction of information technology in the public sphere. In this case it concerns relationships between citizens and the state, here, is intended as a provider of services. Internet constitutes a new channel for providing services. It is no more necessary to go at the counter in order to obtain a document or a certificate. A web site, now, performs those functions providing also the possibility to acquire information and to interact with the public administration in question as it has been seen above. All of this is also seen as an improvement in administrative citizenship. But in these days, it is not only possible to talk about e-government but also about e-participation that will be object of particular attention in the next chapter. Even in this context, information technology provide instruments that favour significantly citizens' actions. Information collection, information exchange and the possibility to be involved actively in entire decision making processes are seen as opportunities unthinkable only few decades ago. Now, the experimental phase is moving its first steps even though it is already possible to outline future scenarios. Unfortunately, even in this case, negative aspects are not absent. The risk that information redundancy can hamper rather than support activities related to participation, the so called digital divide and the possibility that organized interests exploit opportunistically chances provided by these technologies are not remote incidents in this regard. Nevertheless, e-participation is promising as it serves a double proposal. On the one hand, bottom up approaches are favoured. In other words, citizens, spontaneously, can take advantage of this technology to organize themselves in order to pursue a specific objective. On the other hand, top down approaches are favoured as well. Elites of interest groups or political parties can turn to it for citizens' mobilization or followers' organization. In a period in which parties are weak and deal with difficulties for establishing strong relationships with their supporters, information technology represent an opportunity for political communication and propaganda.

6.10Evolving dynamics of participation

It has been mentioned above that participation means to take part and to be engaged in a process or act: a decision making process, for example. But it concerns a membership in an organism, group or community as well, involving a sense of solidarity. These two aspects, that are strictly connected, lead us to examine main streams of participation evolution.

At first, to be member aspects are investigated. A territory, folks, shared cultural elements and an institutional system are the basis on which membership has been built. The national democratic state has been the final result of this process. However, in the last decades things have been changed. Nation states and their apparatuses have been forced to delegate part of their authority both at local and supranational level. They are too big or too little for dealing with specific issues. Decision making processes are moving toward local policy networks, on the one hand, and to international or multinational assemblies on the other hand. In this way, a multilevel participation should be required.

This means that traditional ways to be member vary. At local level, participation tends to be policyrelated whereas it tends to be polity-related at state level. At international level, of course, it is not easy to introduce forms of participation. However, the protection of human rights is seen as an instrument in this direction leading to the so-called cosmopolitan democracies (Held, 1996). But it is far from typical conventional forms of membership. Dahrendorf (2001), in this regard, affirms that institutions that fit democratic standards are not available outside the borders of nation states because of the presence of different ethnic groups and the lack of common language, religion, customs and styles of life. What kind of solidarity is possible in this kind of situations? Nevertheless, the European Union and mainly the United States and Canada, but also the Austrian-Hungarian empire in the past, experience or experienced the coexistence of multiple identities. In this discourse, inevitably, only forms of the so called weak participation are thinkable. Nevertheless, in the nation states, participation characteristics can be seen as the development of activities in operation in Greek city states more than 2000 years ago. This means that it is necessary to find new solutions in order to deal with the multinational and multicultural features of new situations. Situations in which to be member will have forms that do not lead to fully legitimised democratic institutions but they can contribute to sense making functions, for example, in order to increase the awareness of the social utility of this way to be.

Moving our attention on the dynamics that are influencing the taking part and the being engaged aspects of participation, three main issues emerge: the lack of interest, ineffectiveness and manipulation. Statistical data suggests that the role of social networks is decreasing and then the opportunities to be in touch with others. In this way, citizens find themselves in a situation in which nobody asks them to be involved in participation activities. There are not those conditions that consent to be engaged emotively and affectively. The consequence of it is an underepresentation of specific stances. Only stances having reference to more active citizens will be taken into consideration leading to a situation of a decreased level of responsiveness. Rulers will have the tendency to focus on particular group and movement interests for example.

Two main elements are seen as the causes of ineffectiveness or limited or even null impact of participation on rulers' decision: limited competition and the predominant role of vested interests. Concerning the former, it affects mainly elections and takes place when only a party or a candidate has realistic chances to be elected. Of course, in this condition the level of participation will be affected negatively. The role of vested interests is linked, mainly, to the new equilibrium between political power and economic power. Economic power is becoming continuously more influential,

efficiency and market principles are seen as the main milestones to be followed to the detriment of the world of ideas proposed by political parties. Individuals and groups voices are overwhelmed by those ones related to economic interests and then an equality issue emerges. Besides, political power risks to be uncontested due to an unfair competition among political players leading, even in this case, to a lower level of responsiveness and accountability of political elites.

Consensus manipulation is the more subtle and important element influencing negatively participation. Actually, in this case, citizens are engaged and involved. Nevertheless, participation lacks spontaneity, voluntariness and deliberation. Issues are imposed by rulers rather than proposed to them by citizens. At the basis of this phenomenon there are two main factors: the characteristics of mass media and political parties. Mass parties are a clear example in this regard. They transformed themselves into autonomous apparatuses turning to citizens to pursue their own aims rather than the contrary. The crisis of mass parties has not changed the landscape. Political leaders who establish a more direct link with citizens on the basis of specific programs run the risk to create situations that turn to populism and unanimous consensus. Concerning the mass media factor, it is of common knowledge the fact that elites use these instruments in order to influence citizens. Citizens are exposed to the risk to transform themselves into simple onlookers of the political scene in the same way of passive consumers and then unable to make responsible rulers of their activities.

Chapter 7

E-participation: the Partecipa.net case

In Italy, the diffusion of e-democracy is strictly related to a public advice of the Italian Ministry for Technological Innovation that co-funded 56 projects in this field all over Italy. E-participation, here, is considered an aspect of e-democracy and represents the whole of technological and methodological instruments turned to provide a further factor for rendering possible citizens' participation. In this regard, the internet and other innovative channels constitute a possibility for transforming institutional and political communication. In fact, two-way communication becomes possible in order to support decision making processes and inquire about public life, for instance.

Partecipa.net is a direct result of this initiative of the Italian government. It is an e-participation kit envisaged by a consortium led by the Emilia Romagna Region in order to spread e-participation practices on its territory. It comes to light in 2005 because of the above mentioned funds and of the Ministry of Innovation, the coordination and evaluation role played by Cnipa (National Centre for

ICT in the Public Administrations) and the support of 21 local governments and 9 social associations. At the basis of this e-participation kit there are two software applications: UNOX1 and Demos. UNOX1, a communication multi-channel system, has been developed by the municipality of Modena whereas Demos, an electronic discussion forum, by the municipality of Bologna. These two main applications are integrated by methods and guidelines for enabling citizens' participation.

To investigate further in detail Partecipa.net kit, it is useful to subdivide it into electronic identification, back office and front office (Rossi, 2007). Partecipa.Base is the software module dedicated to the system access and username and password are required to login. So, every user has to register his/her name (also a nickname is allowed) to the Partecipa.net portal indicating also an email address in order to complete the registration procedure. Once the registration procedure is ended, accesses to Partecipa.net functionalities are available.

These functionalities are based on back office technologies. A data base of users' profiles constitutes an important element among them. It enables the provision of services according to users' selected options. The FAQ (Frequently Asked Questions) engine is another back office element and a CMS (Content Management System) makes possible the organization of contents of a variety of formats (doc, txt, pdf, ppt, jpg etc.) both by back end and front end users. A GPL (General Public License) characterizes all Partecipa.Net kit software programs in order to allow code reuse to other public administrations.

Borders between electronic identification, front office, back office are becoming continuously more uncertain. Partecipa.base for example, managing users' profiles, makes possible the organization of thematic newsletters. Newsletters of interest selected during the registration phase are then forwarded regularly to subscribers. The FAQ function goes over back office borders as well. Users have at disposal instrument in order to inquire contents available and Partecipa.Ask is the module dedicated to this function. It consists in the possibility to submit specific questions to experts in a specific field. Partecipa.poll is a further module. It is a system devised to do survey about issues at stake supporting a sort of e-voting procedure. Electronic forum and open debate activities are enabled by the Partecipa.Forum module. Other than interactions and discussion among enrolled citizens, this module allows moderator' interventions and content full-text researches. In order to facilitate discussion activities, a virtual multimedia library is available. Partecipa.Biblio is the module dedicated to this function. To sum up, the Partecipanet kit is composed by Partecipa.Base, Partecipa.Ask, Partecipa.Poll, Partecipa.Forum and Partecipa.Biblio.

The Partecipa.net kit is the final result of a project that had at its basis funds available from the public advice of the Italian Ministry for Technological Innovation. This is the spark that puts into motion the entire process. At this point, the Emilia Romagna Region summons up local governments (municipalities and provinces) that could be interested in the e-democracy field. At first, the Regional Assembly, three municipalities, an association of municipalities and two provinces answered yes (only later the number of local governments reached 21). The reasons that lead these institutions to be part of the Partecipa.Net project are diverse. In some cases there is the motivation to upgrade software applications already available; in other cases the spur came from the provision of a regional law that calls upon a wider involvement of citizenship in democratic processes or personal interests of local governors to experiment e-democracy solutions. All these actors gathered in a working group that developed the project. The constitution of this group has been considered a success not only because it succeeded to accomplish the Partecipa.Net project deliverables but also because it transform itself in a platform for developing other projects. In other words, the division of labour established among different actors involved, the nature of their relationships and the characteristics of knowledge shared lead to an entity ready to be used in other similar projects.

7.1Partecipa.Net: an assemblage?

The question now is to see if the dynamics that characterized the Partecipa.Net project can be conceptualized. In other words, may a concept represent the series of events that lead to the establishment of Partecipa.Net? The notion of assemblage is considered useful in this proposal. Even though it has been introduced by several authors (Cooper, 1998; Ciborra, 2005; Ong and Collier, 2005), Lanzara's definition (2009) is taken into account. "Assemblages result from the encounter and the multiple mediations between large ICT systems and the existing institutional frameworks and codes of the society. They are made up of heterogeneous components displaying multiple logics which cannot be easily reduced to one another. Hence, assemblages are not 'hybrid' entities, but rather 'composites' – collection of components which tend to maintain their specificities (Lanzara, 2009 pp. 13-14). It is supposed that these few lines succeed to illustrate rather well what effectively happened in the Partecipat.Net project. UNOX1 and Demos are the two ICT systems at the basis of this project, the Ministry for Technological Innovation, CNIPA, the Emilia Romagna Region, and other local governments represents the institutional framework and the necessity to improve the quality of social and political participation can be seen an aspect in the code of the society. What is emphasized by the concept of assemblage is that all these elements do not transform themselves into a

new entity. On the contrary, UNOX1 and Demos are still there as other public bodies involved in the project. Therefore, assemblages are loosely structured and its components, even though evolve continuously, maintain their autonomy in a situation in which boundaries and linkages tend to shift and drift. This means that assemblages are always ad hoc and changes continuously. Changes take place at different speed according to the different elements involved given that each component has its own time of evolution. In these conditions, equilibriums are always unstable.

Lanzara (2009) identifies a series of features that characterize assemblages. 1) The presence of multiple actors and authority structures of which none of them exercises full control on the project whereas each is in charge only of a part of it (i.e. CNIPA, Emilia Romagna Region and other local governments). 2) Institutional sponsors and project champions emerge. That is, some actors acquire a leading role promoting innovation and taking responsibility of coordination (i.e. Emilia Romagna Region). 3) Episodes, discontinuous activities and situated interventions are seen as further characteristics of assemblages. In other words, activities are not regular (the business as usual of the different components has to go on) but based on specific agreements among actors involved in a specific commitment (i.e. in Partecipa.Net, working groups were autonomous and slightly coordinated by the Emilia Romagna Region). 4) Adapting, repairing and redesign available components consist of the fact that design activities tends to be focused on components already in place that need to be adapted to a new context. At the basis of this way of doing, there are the following questions: what is possible to do with what is already available? What functionalities can be added to present systems in order to pursue our objectives? What kind of simplifications can be introduced in order to streamline existing procedures? (i.e. UNOX1 and Demos). 5) Converting, linking and plumbing. They are related to the conversion and the following connection of components at place in order to build a more complex assemblage (i.e. UNOX1 and Demos have been readapted and connected each other). 6) Redesigning administrative routines, interfaces and jurisdictions are enabled by the different systems that now are connected to each other. Procedures involved in separated domains are now linked leading to new way of doing things (i.e. it is the combination of UNOX1 (a system for informing citizens about social and institutional life of the Municipality of Modena) and Demos (an electronic forum) at the basis of participation activities electronically supported). 7) Characteristics of the installed based (pre-existing technical and institutional materials) can be more or less obtrusive or enabling. The possibility to introduce gateways, the level of recombinability and the degree of modularity contribute to the taking shape to new assemblages (i.e.

UNOX1 faces technical problems in its adoption and Demos functionalities support a specific decision making process that can be in contrast with normal procedures in off line situations).

To conclude, Lanzara (2009) suggests that assemblages can be evaluated according to three main perspectives: technical compatibility, functional compatibility and institutional compatibility. Technical compatibility refers to standards, modularity, interfaces, protocols etc. At present, Partecipa. Net technical compatibility is still at stake. Several pilot projects have already been put into practice and two of them will be taken into consideration in the following sections. Nevertheless, Partecipa. Forum is considered too rigid and outdated from a technical point of view, interoperability issues have continued to emerge among the different components and security standards of Partecipa. Net do not match Emilia Romagna Region requirements, for example. Concerning functional compatibility, the question related to the consonance between technological components and social and institutional components (i.e. is Partecipa. Net effectively supportive of social-political participation?) has been raised as well. Is Partecipa. Forum exactly the more appropriate tool as it is based on a specific method of participation named Delphi that is considered too complex to be implemented? Only institutional compatibility (satisfactory forms of collaborations among agencies and organizations involved in assemblages due to a shared language, mutual understanding and accountability) does not seem to be put into question. All of this means that the future of Partecipa. Net is uncertain and it is not excluded that it will be discharged even though, most probably, as an assemblage, it will continue to transform itself taking other shapes.

7.2The meaning of participation in two Partecipa.Net cases.

The point now is to examine the introduction of the Partecipa. Net kit in two specific contexts: "gli orari della città" and "per via Gallucci". In the "gli orari della città" case, the objective was that one to involve citizens of the Municipality of Modena in order to reorganize opening hours of bars, shops, public offices and also public transportations timetables and, in this way, to render more welcoming the city. "per via Gallucci" represents an attempt to put under control conflicts aroused between via Gallucci residents, on the one hand, and customers and barkeepers of the same street, on the other hand, as Via Gallucci is one of the more famous streets for its night spots in Modena.

The methodology used to investigate these two e-participation projects is in the circle of the case study research (Yin, 2003). The research question at stake here is related to the meanings and the interpretations of participation emerged in the two cases under examination. In order to follow this objective, Partecipa.Net facilitators have been interviewed. In fact, the functioning of this e-

participation tool requires a figure in charge both of possible technical problems occurred to users and of possible misunderstandings and conflicts aroused among participants in the use of Partecipa. Forum. Even though the perspective of facilitators is partial as users and public administrators would have provided probably a different point of view of these experimentations, their role is central. Facilitators have on a string the complete situation concerning what is going on and in some sense they are the thermometer of the participation activity in course. This is the reason why the attention as been posed on this role.

Study propositions or issue sub-questions are helpful in order to enrich the research question at stake enlightening more in detail the directions that this study pursued. Three sub-questions seem to be significant in this regard: the style of mediation or facilitation, the characteristics of participation and the atmosphere experienced by users.

A further step in this research design is represented by units of analysis. Units of analysis in this case are "gli orari della città" and "per via Gallucci" facilitators. As it has been mentioned above, it is through their role that the research question and, of course, even sub-questions, have been examined. However, this role has been interpreted turning to the three "worlds" proposed by Heidegger (2004) and already mentioned in the first chapter of this work: the 'surrounding world' (milieu), the 'communal world' and the 'self world'. Actually, the units of analysis are based on the overlapping of these three "worlds".

The final step concerns the interpretation of findings and then modalities that lead to meanings and understandings related to participation in "gli orari della città" and "per via Gallucci". Even in this case, Heidegger's perspective proposed in the first chapter has been taken as point of reference. This means that the investigation of sense of 'content', sense of 'relation' and sense of 'actualization' or 'enactment' constitute the main factors to examine the "rationale" (verbum internum) of the introduction of Partecipa.Net kit in these two cases. Case similarities (users coming from the same context, a same technological kit and similar subject of application) lead not to analyse each of them in its singularity but altogether.

7.2.1The style of mediation: meanings and interpretations

The mission of the facilitator was not that one to be directly involved in what was going on in the forum or in other activities that supported participation. Rather, it was in his/her responsibility to supervise activities in a detached way without influencing the substance of what was object of discussion. Nevertheless, it was fundamental to play an active role leading debates and exchanges of

ideas in what was considered relevant for the issues at stake. This was the reason why facilitators were trained, even though not in an exhaustive way, both in order to avoid problems of etiquette and to guide discussions to support the creation of the so called collective intelligence as it has been emphasized by one of the facilitators. Collective intelligence consists in identifying viable solutions in order to deal with issues at stake and this requires a series of activities related not only to the management of interactions but also to the support of appropriate information, contents, statistical data etc. All these considerations emphasize sense of 'content' of mediation. Now, let's move to sense of 'relation'.

Sense of 'content' refers to entities present in a situation as objects, people, technology, values and cultures. Differently, sense of 'relation' refers to the network of meanings and references emerged from relationships established by these entities. Therefore, the point now is to analyse the nature of connections that took place at the level of mediation. Technical problems, substantially, did not occur. In some cases, it has been necessary to support users at the authentication stage but this was all. A more active role played by mediators was required when discussions turned to be useless, not creative or not containing a proposal. This was mainly the case when objects of debate were not closed to participants' needs. In those situations, it was necessary to revitalise interactions even though, in some cases, the role of leadership put at stake was not considered sufficient. Probably, it would have been necessary to be more incisive in order to bring into question relevant issues that could not get into the debate only by interventions of the forum users.

The objective, at this point, is to examine sense of 'actualization' or 'enactment' experienced in the course of mediation. That is, to wonder how 'content' and 'relation' have been made active and in the stream of life by facilitators. The role of the facilitator has been lived in a rather distant and aloof way. The professional character prevailed rather than an approach more closed to existing debates. Users considered facilitators as a sort of gatekeeper that supervised forum activities and a gentlemen agreement imposed itself. Partecipa.Net was provided by the Municipality of Modena and this was not neutral on the characteristics of interactions. The institutional role played by this local government brought about a kind of fear and also suspicious to users influencing the nature of the discussion in course. Probably, it was inevitable that the involvement of a public authority causes this kind of attitude. Besides, the point was if effectively this form of participation activity would lead to specific results and if, once they will be reached, they would be taken into consideration for the policy making. These aspects were not very clear and this, of course, contributed to establish citizens' approach to this e-participation tool.

7.2.2The characteristics of participation: meanings and interpretations

Even in this case, the analysis of the characteristics of participation begins from the sense of 'content'. In this proposal, the themes object of debate in the electronic forum have been considered important. If they were not really closed to citizens, the level of interaction risk to be sterile, fruitless and unable to attract a considerable number of participants. The fact that themes have been decided by the Municipality and not by citizens themselves has been considered an aspect that, in some way, influenced negatively the development of "gli orari della città" and "per via Gallucci" projects. In addition, a traditional advertising campaign for explaining in detail the terms of the issues at stake to be faced through deliberative procedures was considered fundamental. On the other hand, information spread across existing electronic means as the Municipality mailing lists or to the UNOX1 services was judged sufficient. It is not an easy task to inform citizens about the possibility to participate actively in a decision making process through the internet. Besides, budget constraints that Italian local governments are suffering in these years rendered difficult the possibility to introduce appropriately a tool like Partecipa. Net to Modena citizens. Another factor that contributed to outline participation in the two cases under examination concerns Municipality attitude in respect of this tool. It is lacked a clear support to it. All potentialities have not been taken into consideration and the planning stage was not considered sufficient.

Concerning sense of 'relation', in both cases under examination it was possible to detect a learning process. That is, the modalities and also the quality of discussions improved considerably as time passed by. Users developed a reciprocal understanding, evaluations on the objects of debate became continuously more accurate and constructive proposals emerged deeming the several aspects of the discussions in course. Nevertheless, it was not possible to say that at the end of the process a sort of community took shape. Or, better, an interesting phenomenon happened at least in one case. Members of a local council, represented of specific interests debated through Partecipa.Net, decided to join the forum. However, even though their activities contributed significantly to enrich the level of interactions, their specific position was overrepresented biasing the terms of the debate. As it has been mentioned in the previous chapter, this is one of the negative side effects enabled by e-participation tools. Nevertheless, it has to be mentioned also a positive side effect. The trend of the on line debates brought about the Municipality to introduce also off line aspects to enlarge in this way the level of discussions.

Sense of 'actualization' or 'enactment' is investigated focusing both on Municipality and citizens' attitudes in respect of "gli orari della città" and "per via Gallucci" projects. Citizens who decided to

be involved in these two projects saw e-participation as a further instrument to have a say in the city government. Frustrations and also hostility toward the Municipality was perceptible due mainly to problems aroused in Via Gallucci. Dissatisfactions that usually had no chance to be expressed found a new way to be channelled. The wonder was if this new opportunity allowed a more incisive protest and also the possibility to make some proposals. Actually, some results have been reached and suggestions came out in the forum have been taken into consideration. Besides, as time passed by, the hostile attitude reduced significantly and the level of discussion turned to be more fruitful. The Municipality of Modena is not alien to this situation. Tools like Partecipa.Net were seen as something new, a little strange, marginal and not as a solution to be prioritised. Therefore, there has been the impression that the decision to adopt these tools was to pretend to be innovative and up to date. Nevertheless, there was not sufficient knowledge of these instruments and then the risk of not being in control of the situation perceived by politicians. At the end, traditional ways to stimulate participation like local assemblies seemed still preferred.

7.2.3The atmosphere experienced by users: meanings and interpretations

In order to take into consideration sense of 'content' related to users, let's start from the their features. There were not only young people. On the contrary, the majority was between the 30 and 50 years old. The language style used suggested that many of them were professionals or highly educated and with a significant computer literacy. This means that the young and the old range of the population were not importantly represented. In addition, participation was not anonymous, as it has been already mentioned users' registration was required, even though it was possible to use a nick name rather than the real one. Besides, some areas of the Municipality were not connected by ADSL rendering the use of the Partecipa.Net kit more difficult.

Concerning sense of 'relation', it has to be mentioned that discussions have also reached a high levels. It is not appropriated to define them as a sort of chat. Rather, there has been the impression that participants have been motivated and committed to their own points of view. It was shared the awareness that what was going on was important and worthwhile. Tits for tats have not been missed. Nevertheless, they did not compromise the entire discourse. At least in one of the two cases, two categories of participants could be detected. On the one hand, those ones connected to the local council and the rest. The former tended to focus only on the subject of direct interest whereas the latter taught a far larger range of issues.

These two categories influenced also sense of 'actualization' or 'enactment'. A sense of solidarity emerged in the local council group. The proverb "united we stand, divided we fall" well represents the atmosphere shared by this group of people. The rest of the participants expressed a different attitude. The attitude of gentlemen/gentlewomen that cordially even though firmly exchanges ideas on subjects at stake.

7.3Some data and final conclusions

So far, differently from the chapter dedicated to e-filing in three Italian public bodies, any data related to the proliferation of e-participation in the two cases under examination have not been presented. The idea at the basis of this decision was to deal with this topic at the end of the work trying a sort of comparison between the use rate in these two fields.

Data of "gli orari della città" and "per via Gallucci" are not well comparable each others, nevertheless, it is believed that they are, all the same, rather significant. Data of Table 1 requires further specification. With mailing list users (43.500) are intended individuals registered to UNOX1 services. Nevertheless, residents outside the Municipality of Modena were not been informed about "gli orari della città" project as they were not directly involved. Besides, it has to be taken into consideration, as it has already mentioned above, that a traditional advertising campaign of the project has been done as well. This contributes to have a picture about citizens who could come to know about it. Web pages surfed indicate the number of hits that the Partecipa.Net kit recorded. They amount to 11.258 that differentiates itself considerably in respect of the 1.216 hits of the forum. Nevertheless, and despite of these hits, only 88 were comments on the forum and 117 questionnaires always related to the forum (questionnaires are related to the Partecipa.Poll and are used to select which subject will be discussed later into the forum).

Mailing list users	43.500
Web pages surfed	11.258
Individuals who surfed the forum	1.216
Number of the comments on the forum	88
Number of questionnaires filled up	117

Table n. 6: Data of the "gli orari della città" project at the Modena Municipality (Source: Comune di Modena)

Concerning "per via Gallucci", data related to the forum is not available but there is data related to questionnaires that have been completed only by few decades of citizens. In this proposal, it is important to mention that the number of citizens informed about this project should be similar to the "gli orari della città" project.

It is rather clear that this data are not satisfactory. It is hard to discourse about e-participation when only a narrow slice of the population effectively takes part actively to an issue of public interest like in the cases of "per via Gallucci" or "gli orari della città". In addition, this is not only a problem of the Municipality of Modena. Data concerning other realities (i.e. the Municipality of Ferrara, see table n. 7), always involved in the introduction of Partecipa. Net kit, does not indicate a different trend.

Web pages surfed (informative material)	5.126
Number of contacts on the forum	4.403
Number of comments on the forum	261
Number of individuals who participated to the	36
forum	

Table 7 Data related to Forum Agorà (10 forums on main priorities of Ferrara citizens)(Source:

Comune di Ferrara)

Nevertheless, the evaluation of these projects should not be seen only according to a negative perspective. New ideas emerged and inputs from participants led to interventions that effectively were put into practice. Local administrators started to be more familiars with tools like Partecipa.Net appraising its potentialities. Quarrels and other unfortunate misunderstandings, substantially, did not take place and even more hostile attitudes vanished as time passed by. This is noticeable considering that off line practices of participation are usually characterised by an high level of contentiousness.

On the other hand, the point that should be emphasized is the different approach used by the Municipality of Modena and public bodies like the Tax Agency, the National Institute of Social Insurance and Chambers of Commerce. It has to be mentioned that in the case of Partecipa.Net projects we still at an experimental stage and it took time to the three public bodies before to obtain significant results. Nevertheless, willy nilly, the latter, in its strategy of development, took into consideration the role of mediators that, in this work, have been denominated as social brokers. They are the main players using e-filing systems as it has already been mentioned above. Fisco Online, the

Tax Agency e-filing system dedicated to citizens for submitting tax returns autonomously, did not experience the same results that, on the contrary, are not promising.

In "per via Gallucci" or "gli orari della città" cases, the idea was to solicit directly citizens both through the UNOX1 system and through a traditional advertising campaign. For sure, these instruments were important as it is supposed that if someone is registered in one of the mailing lists of the Municipality and is familiar with IT, he/she will consider to be involved actively in the government of the city. Nevertheless, this was only an auspice and a presumption that citizens would take advantage of e-participation tools.

In this regard, it is considered interesting the role of the local council that regrouped a significant number of participants to the two cases of e-participation under examination. Was it only by chance that this group of people decided to take advantage of these tools in order to be more incisive on matter at stake? So, can this local council be considered a social broker? Which other players can play a similar role without biasing the level of participation? Can municipalities stimulate the social, political and institutional context in order to constitute a number of players able to make participation effective and fruitful even through electronic means?

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