Fernando G. Alberti

A COGNITIVE CONSTRUCTIONIST APPROACH ON INDUSTRIAL DISTRICTS

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ABSTRACT

Scholars and practitioners have long recognized geographically defined regional clusters of firms – i.e. industrial districts – as relevant socio-economic engines for the survival, the prosperity and, hence, the competitiveness of regions and countries. A central issue concerns the understanding of how a population of specialized firms and individuals spatially located in a geographical area becomes an industrial district, so what makes it an industrial district, i.e. that special organizational form which is well-recognized for enhancing cooperation, coordination, knowledge transfer and innovation. Prior research on industrial districts suggests that they are the result of the path-dependent agglomeration of small flexibly-specialized firms, together with external economies, local resources and local labor pools, supported by specialized institutions. However, there may be circumstances where even assuring the concurrent presence in a geographical area of most of the typical structural features of an industrial district does not make it to act as such. In this paper, we argue that industrial districts are not only the result of structural features, but also the product of how individuals perceive and evaluate the industrial district itself and how they perceive and evaluate their belonging to it. Thus, determinants of industrial districts may be found in individual and collective cognitions, through which district members assign meaning to their belonging to the district and socially construct the district, enacting it. We explore our ideas in an empirical study utilizing a sample of respondents (entrepreneurs, managers, senior public servants) operating in a so-called typical Italian industrial district, i.e. the textile district of Como in Northern Italy. We find that individuals in the area of Como mostly lack a sense of belonging to the industrial district, and surprisingly to be in an industrial district, they show a wide variety of idiosyncratic cognitions, which prevail on collective cognitions. This has clear drawbacks on everyday behaviors of individuals which appear to be averse towards an active participation in the collective enactment of the district, thus causing the deconstruction of the industrial district of Como.

Keywords: Industrial district; cognition; constructionism; way-of-thinking; cognitive map.
The paper is based on my doctoral dissertation «What makes it an industrial district? A cognitive constructionist approach», defended in November 2002 and published by JIBS – Jönköping International Business School (Sweden) in the Research Report Series, no. 1 (2003). Previous versions of this paper were presented at the 8th Workshop on Managerial and Organizational Cognition, in Paris (2001), the 17th EGOS Colloquium, in Lyon (2001), the 33rd EISB Conference, in Milan (2003) and at the EURAM – European Academy of Management, in Milan (2003). I would like to thank Roland Calori, Leif Melin and Alessandro Sinatra for having commented previous versions of this paper, guiding my research with their precious suggestions. I am in debt also to Elaine Mosakowski, Rodolphe Durand, Pino Audia, Lucio Biggiero, Alessia Sammarra, Carlo Salvato, Federico Visconti, Mario Minoja for their valuable comments and suggestions during conference presentations.
INTRODUCTION

Scholars and practitioners have long recognized geographically defined regional clusters of firms – i.e. industrial districts – as relevant socio-economic engines for the survival, the prosperity and, hence, the competitiveness of regions and countries (Porter, 1998). Italian industrial districts (Markusen, 1996), in particular, have proven to be an organizational model for local socio-economic development (Piore and Sabel, 1984; Pyke et al., 1990), stimulating the debate in several branches of social sciences: economic geography, economic history, applied economics and international strategy. The variety of perspectives and definitions about industrial districts illustrates the multi-voiced character of the field. However a central issue concerns the understanding of how a population of specialized firms and individuals spatially located in a geographical area becomes an industrial district, so what makes it an industrial district, i.e. that special organizational form which is well-recognized for enhancing cooperation, coordination, knowledge transfer and innovation.

Prior research on industrial districts (Piore and Sabel, 1984; Becattini, 1990; Saxenian, 1994; Markusen, 1996; Porter, 1998) suggests that they are the result of the path-dependent agglomeration of small flexibly-specialized firms, together with external economies, local resources and local labor pools, supported by specialized institutions.

However, there may be circumstances where even assuring the concurrent presence in a geographical area of most of the typical structural features of an industrial district (Becattini, 1979; 1990) does not make it to act as such. This proved to be particularly the case when industrial districts have been created under artificial conditions instead of letting them emerge spontaneously as the result of trust mechanism, mutual understanding and cooperation, i.e. as the result of individuals’ cognitions.

In this paper, we argue that industrial districts are not only the result of structural features, but also the product of how individuals perceive and evaluate the industrial district itself and how they perceive and evaluate their belonging to it (Borroi et al., 1998; Cillo e Troilo, 1997; 2002; Viteritti, 2000; Sammarra and Biggiero, 2001a). Thus, determinants of industrial districts may be found in individual and collective cognitions, through which district members assign meaning to their belonging to the district and socially construct the district, enacting it (Smireich and Stubbart, 1985; Weick, 1979; Berger and Luckmann, 1967).

We develop these ideas in more detail below, and propose an analysis of individuals’ cognitions, through which they interpret the cues from the environment, which, conversely, is the outcome of their own enactment. The literature on managerial and organizational cognition, which focuses on individual and collective cognitions in the enactment of environments, suits our task. Accordingly, the concept of ‘way-of-thinking’, which consists of a number of thematic sets of values, assumptions, beliefs, ideas and thoughts about a specific domain (i.e., the industrial district), is applied. Individuals’ Ways-of-Thinking are analyzed through cognitive mapping techniques, searching for the sense of belonging and collective cognitions of individuals, which are the major concerns of the present study.

We explore our ideas in an empirical study utilizing a sample of respondents (entrepreneurs, managers, senior public servants) operating in a so-called typical Italian industrial district, i.e. the textile district of Como in Northern Italy. The analysis of respondents’ cognitive maps suggests that what makes a geographical cluster of firms an industrial district is a matter of individuals’ cognitions which enact it in their everyday social constructions and behaviors.

We find that individuals in the area of Como mostly lack a sense of belonging to the industrial district, despite they are located in that geographical area and in the same textile
business. Such a lack dismantles the implicit assumption widely spread in the literature on industrial districts that the physical belonging to the local industry agglomeration implies a cognitive belonging to it. Further, our findings on the lack of sense of belonging have clear drawbacks on everyday behaviors of individuals which appear to be averse towards an active participation in the collective construction of the district. Finally, our empirical analysis explores individuals’ cognitions, identifying thematic sets of constructs and exploring core constructs within the maps. Each individual proved to have a unique set of cognitions, as suggested in literature (Hellgren and Melin, 1993), but, surprisingly to be in an industrial district, with a wide variety of idiosyncratic positions, which prevail on precise collective cognitions. Yet, assuming a certain degree of approximation in the comparison of idiosyncratic individual cognitive maps two broad collective cognitions emerge: one vastly diffused which is characterized by lack of sense of belonging, detachment from the local context and individualism; the other, less and less diffused, comprises exactly the opposite cognitions of the first one.

The remainder of the paper is organized as follows: In the first section we discuss industrial districts as enacted environments, abandoning a realist view on them and embracing a constructionist perspective. This is followed by a discussion of the method we used and the empirical setting where we conducted the study. Our empirical analysis follows, and we conclude with a discussion of implications, limitations, and potential extensions of the research.

THEORETICAL BACKGROUND

In literature there has been a progressive convergence around the concept of industrial district towards the definition proposed by Becattini (1989a: 112) considered as the ‘canonical’ one. According to Becattini, an industrial district is «a socio-territorial entity which is characterized by the active presence of both a community of people and a population of firms in one naturally and historically bounded area».

Over the past two decades a growing number of scholars has dealt with the topic of industrial districts, observing them through the lenses of different theoretical frameworks: industrial organization (Vaccà, 1986; Becattini, 1979, 1987, 1989a, 1989b, 1990; Brusco, 1989), sociology (Bagnasco, 1977, 1988; Innocenti, 1985; Provasi, 1995; Parri, 1993; Viteritti, 2000), economic geography (Sforzi, 1989; Storper and Scott, 1989; Tinacci Mossello, 1990; Vagaggini, 1990, Markusen, 1996), economic history (Castronovo, 1980; Sapelli, 1989; Sapelli and Carnevali, 1994; Amatori and Colli, 2001), political economy (Fuà and Zacchia, 1983; Nuti, 1992; Bramanti and Senn, 1991; Ciciotti, 1993; Garofoli, 1991a, 1992; Antonelli et al., 1988) and international strategy (Visconti, 1996; Lipparini and Lomi, 1999; Lazerson and Lorenzoni, 1999; Porter, 1998), thus contributing in making the field a multi-voiced one.

The review of the contributions about the concept of industrial district indicates that industrial districts have been investigated only as objective environments, almost forgetting the insightful suggestion, made by Becattini (1989a) in his original formulation, about the consciousness of individuals and the important role of shared beliefs. The prevailing view of industrial districts implies the possibility to identify specific parameters and variables, whose presence and interrelation guarantees the existence of an industrial district in a certain area and the possibility to identify its boundaries (Becattini, 1989a; 1989b; Sforzi, 1990; 1991).
Nevertheless, such assumptions do not always permit to shed enough light on the evolution and transformation that some industrial districts are currently facing and, thus, «risk to bring scholars to aseptic and sterile classifications built on parameters that are external to the phenomenon under study» (Becattini, 1987).

Staber argues that much of the previous research on industrial districts «has followed a formal structuralist approach without any consideration of the subjective aspects [...] The model [of industrial districts] must also capture actor’s orientations towards one another and towards the society in which relations are embedded» (1996: 172, emphasis added).

Likewise, Becattini (2002: 488) very recently has argued that «the study of the industrial district as a distinct form of organization of production has now run its course, and that the focus should now shift to the congruence, in time and space, among the elementary processes into which an evolving district can be decomposed». Among such elementary processes, Becattini indicates: «the formation and reproduction of a ‘sense of belonging’ to the district» (2002: 489, emphasis added). Each elementary process, indicated by Becattini «more or less directly links changes in the productive structure of the local system with the psychological features of its inhabitants, and vice versa» (2002: 489, emphasis added).

Such an approach allows the fact that individuals could interpret their belonging or not belonging to the industrial district in different ways, behaving, accordingly, in ways that may appear coherent only from their own point of view, thus subjectively.

The sense of belonging, meant as the consciousness of local individuals to belong to a specific industrial district (Becattini, 1987: 39), has an important role in affecting individuals’ actions, which day by day will reiterate their belonging to it, assigning a shared meaning to their belonging through their actions.

In the field of industrial districts, there seems to be an implicit assumption (Cillo and Troilo, 2002) according to which the physical belonging to a district brings with it the sense of belonging of individuals as well.

In fact, a common characteristic of conceptual and empirical contributions in the field of industrial districts is their realist stance, according to which industrial districts are objective environments where the cognitive belonging is reduced to a simple physical belonging.

Hence, a first research question emerges:

**Research question #1: Does the territorial belonging of a population of firms and a community of people to an industrial district imply the sense of belonging of individuals to the district?**

Abandoning a realist perspective on industrial districts (objective environments) and embracing a constructionist one, which recognizes the role of individuals in the constitution of their environment (enacted environments; Smircich and Stubbart, 1985), the topic of the ‘sense of belonging’ becomes central.

As a matter of fact, socio-cultural dynamics of industrial districts (Becattini, 1989a), such as the industrial atmosphere, inter-personal trust, inter-firm cooperation and embeddedness, assume a different connotation depending on whether the sense of belonging of individuals is present or not.

The indication by Becattini (1987) on the consciousness of individual district members goes in this direction and merit further consideration. The analysis of the sense of belonging calls for a cognitive account of industrial districts’ members, taking a subjective stance (Smircich and Stubbart, 1985; Weick, 1979). This implies an analysis of individuals’ cognitions, through which they interpret the cues from the environment, which is, on the other way round, the outcome of their own thinking and acting (enactment; Weick, 1993). According to a constructionist perspective, social reality is the outcome of a process of
sensemaking by individuals (Weick, 1993), who, interactively, socially construct it through their cognitions.

Accordingly, the canonical conceptualization of industrial districts offers a partial view of the phenomenon and depicts it as an objective reality. As discussed by Becattini (1987: 36) himself, such an approach risks bringing scholars to «aseptic and sterile classifications built on parameters that are external to the phenomenon under study».

This paper proposes a view on industrial districts as socially constructed systems of shared meanings (Burrell and Morgan, 1979; Pfeffer, 1981; Weick, 1979). Such approach to environments and organizations, as enacted by individuals, relies much on the influence of interpretive sociology (Schutz, 1967), sociology of knowledge (Berger and Luckmann, 1967) and cognitive social psychology (Weick, 1979). From such interpretive worldview, separate objective ‘environments’, industrial districts in this case, simply do not exist (Burrell and Morgan 1979). Instead, organizations and environments are convenient labels for patterns of activity. What people refer to as their environment is generated by human actions and accompanying intellectual efforts to make sense out of these actions (cognitions). Enactment theory abandons the idea of concrete, material ‘reality’ in favor of a largely socially-created symbolic world (Winch, 1958).

If one accepts the notion that people understand the world through bracketing and chunking experience into meaningful units (Schutz, 1967; Weick, 1979), it then follows that ‘industrial districts’ provide convenient, but also arbitrary, labels for some portions of experience. Researchers often ignore the metaphoric and symbolic bases of organized life that create and sustain these organizational ideas. An interpretive perspective places these processes and symbolic entities at the centre of analysis of industrial districts, which, then, are defined as the degree to which a community of people (Becattini, 1989a) share many beliefs, values, and assumptions that encourage them to make mutually-reinforcing interpretations of their own acts and the acts of others.

The above discussion suggests focusing research efforts about the concept of industrial district on individual district members’ cognitions. Their collective cognitions might, in fact, indicate the shared systems of meanings they assign to their belonging to the industrial district and to the industrial district itself (Gray et al., 1985), thus socially constructing it (Berger and Luckmann, 1967).

Among the different concepts applicable from a cognitive perspective, the concept which suits this study best is the one of ‘way-of-thinking’, developed by Hellgren and Melin (1993) for the cognitive analysis of organizations and socio-economic contexts at large.

Hellgren and Melin’s reason for introducing the concept Ways-of-Thinking is, thus, to understand the complex but crucial relation between managerial thought and action.

The Ways-of-Thinking concept relates more directly to action compared to other cognitive constructs, moreover an individual’s Ways-of-Thinking comprises all those cognitive schemas an individual has developed with regard to a specific domain. With the Ways-of-Thinking concept Hellgren and Melin try to capture the individual’s cognitive and emotional mind structure as a holistic phenomenon. A way-of-thinking consists of a number of thematic sets of values, assumptions, beliefs, ideas and thoughts about a specific domain. Each Way-of-Thinking represents sediments from the total life experience and the personality of an individual, thus, as Hellgren and Melin (1993) have empirically shown, a Ways-of-Thinking is quite stable over time and it is shaped by an individual’s own personality and history. The concept of Ways-of-Thinking may be conveniently applied even to a community of individuals, for instance to industrial districts. As a matter of fact, the sole account of individual Ways-of-Thinking is insufficient to answer the research questions of this study and to contribute in a cognitive constructionist re-conceptualization of industrial districts. Hence, a reflection on the collective dimension of Ways-of-Thinking is deemed necessary. A
collective Ways-of-Thinking is likely to be the result of the interaction among individuals belonging to an organizational context (Smircich, 1983; Langfield-Smith, 1992), thus it may be preliminary defined as a partial overlapping among individuals’ Ways-of-Thinking (Hellgren and Melin, 1993).

Hence, a second research question emerges:

**Research question #2: To what extent do individual district members have collective Ways-of-Thinking about the industrial district to which they physically belong?**

Studies of industrial districts through a cognitive approach have been recently carried out. Such literature, that has focused on individuals as units of analysis drawing on cognitive theories as conceptual frameworks, comprehends, in particular, the works by Borroi et al., 1998; Viteritti, 2000; Sammarra and Biggiero, 2001a, 2001b; Cillo and Troilo, 1997, 2002.

Borroi et al. (1998) focused on local strategists’ perceptions of the competitive structure existing within the textile-clothing industrial district of Carpi. Replicating the research design of Porac et al. (1995) on the Scottish knitwear industrial district, they addressed individual decision makers as a unit of analysis, narrowing down the focus from previous studies on industrial districts. Viteritti (2000) used a narrative constructionist approach to investigate the process of identification of individuals in the industrial district of Miranda, reading the phenomenon of industrial district’s identity from a subjective point of view. Likewise, even if moving from a different epistemological and theoretical standpoint, Sammarra and Biggiero (2001a; 2001b) focused their research attention towards identification processes of individuals operating within the industrial district of Miranda, hence theorizing on identity construction mechanisms at the district level. Finally, Cillo and Troilo (1997; 2002), who started such process of narrowing down the unit of analysis to individuals operating within industrial districts, contributed in studying the possibility to consider the local music industry of Naples as an industrial district, from a subjective perspective.

However, still much research is needed to understand the role of individual and collective cognitions in the social construction of an industrial district.

**METHOD**

In order to comply with the epistemological approach of this study, thus to shift the research focus towards how individuals enact the industrial district they are in, cognitive maps are assumed to be a suitable research instrument, since they provide a graphical description of the unique ways in which individuals view a particular domain, i.e. a field of thought or action (Axelrod, 1976; Bougon, 1983; Eden et al., 1983). In particular, causal cognitive maps, amongst the others, are the research instrument that suits best. Causal cognitive maps allow the researcher to focus on action. Moreover, as indicated in the research note by Cillo and Troilo (2002) on how to investigate the sense of belonging and individuals’ cognitions in industrial districts, causal maps might allow temporal interconnectedness as well as a focus on the intertwined nature of thinking and acting of individuals in enacting their socio-economic environment.
Empirical Setting

The choice of the empirical setting of this research, namely the industrial district of Como, has been guided by the purposes of analyzing a typical Italian industrial district, widely recognized as one of the most important textile/fashion arenas in the world, which evolved over centuries in a path-dependent way.

Silk reached Como around the XVI century, where a much more consolidated wool industry was already settled. At the beginning, silk production was managed in a handicraft manner by merchants who normally bought yarns and gave them to those small artisans owning a loom. In a few decades, textile factories flourished not only in the city of Como, but also in Brianza [the area between Milan and Como] and along the shores of the lake. Under Spanish rule, in the XVII century, the silk industry of Como almost disappeared, becoming re-established again after 1720 and consolidating under the Austrian domination. With the arrival of the industrial revolution, the numerous watercourses running towards the lake from the mountains surrounding Como, favored the construction of twisting and spinning machines in all the territory. After the Second World War, silk production in Como kept on growing, stimulated by lower labor costs and by a weak Japanese rivalry. After 1952, a slowing down process started, worsened by the spread of polyester, acrylic and nylon fibers and by protectionist policies in commercial exchanges. In this period, the maturity phase of the district was already starting. New quality, standardization and demand price, renovated the district of Como and led to an increasing specialization of roles among firms. The employment rate in the Italian silk industry then began a slowing-down process, that is still going on. The reasons for such remarkable changes were technological, due to the introduction of lower labor-intensive technologies, and partly linked to the emergence of social conflicts and to increased labor costs. For these reasons, the structure of the district became more complex and single actors more specialized. Some firms began to feel the problem of choosing whether to evolve towards a higher vertical integration rather than a simple and unstructured organization. These choices were at the same time caused and stimulated by a fiercer international competition, which was the precursor of globalization.

The filière of Como is composed by a series of strongly independent stages through which raw materials (silk yarns) are progressively turned into finished products: silk fabrics chiefly for women’s wear (55% of the industry’s business), for tie manufacturing (25% of the business) and for ladies’ apparel, such as foulards, scarves, stoles, shawls (approximately 15-20% of the sector’s business). This kind of organization, together with the complexity and multiplicity of the production stages, engendered a progressive fragmentation of the production chain and favored the creation of firms with a marked specialization in some (often only one) intermediate processing stages.

During the last decade the industrial district of Como has faced a tremendous crisis that has negatively affected the evolution and survival of the entire district over time. The determinants of such a decline are several, complex and intertwined with each other. Furthermore, within the district, the crisis has heterogeneously affected different products, phases of the production process and target markets. The decline in Como began in the early 1990s, but initially both analysts and practitioners perceived it as a business cycle of recession, i.e. as a cyclical crisis and not a structural decline. That cyclical recession turned out to be structural as time passed by and the district delayed its reaction, revealing also the existence of endogenous factors of that crisis.
Data Collection

The cognitive maps, to be used in the aftermath of this research, were obtained in three stages: the collection of cognitive material, the coding of it and finally the search for core concepts and homogeneous sets of meanings.

Considering the high fragmentation of the silk industry in the area of Como it was quite difficult to select the respondents for this research, who could be considered key actors and also enhance the quality and the richness of the findings. We constructed a judgmental sample based on the advice of key informants. Individuals to be interviewed were selected through a sort of snowball sampling technique, asking to each key informant to indicate a list of other prospect contact persons and then reiterating the process. According to this approach, firstly a reliable actor involved in the industry was contacted in order to have a list of key actors of the district of Como. Secondly, a major representative figure, both of the area of Como and of the world of fashion in Italy, namely the President of the Italian Chamber of Fashion, was contacted in order to have another list of key actors to interview. Starting from the overlapping of these two lists of prospect contacts, a few names, common to both, appeared to be a good starting point both for their role and relevance in the district. The interviews to these actors produced other lists of names that reiterated this sort of snowball sampling technique. We intentionally limited our sample when all new names proposed by interviewees were already be considered by us, thus when the group of contact persons was self-referring.

<table>
<thead>
<tr>
<th>Table 1. Main informants’ profile</th>
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<tr>
<td><strong>Interviewees</strong></td>
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<td>1. Entrepreneur</td>
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<td>2. Top manager</td>
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<tr>
<td>3. Entrepreneur</td>
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<tr>
<td>4. Top manager</td>
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<tr>
<td>5. Entrepreneur/Activist in business association</td>
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<td>6. Manager</td>
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<td>7. Top manager</td>
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<tr>
<td>8. Entrepreneur</td>
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<td>9. Executive of a local business association</td>
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<td>10. Entrepreneur</td>
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<td>11. Entrepreneur</td>
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<td>12. Entrepreneur</td>
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<td>13. Manager</td>
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<td>14. Entrepreneur</td>
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<tr>
<td>15. Executive of a local business association</td>
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<td>16. Entrepreneur</td>
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**average ~24 years** | **total of 36 hours**

As a total, 30 individuals, both from industry and local institutions, were contacted, even if only 25 of them accepted to be interviewed in depth. In order to comply with the criteria normally applied to cognitive mapping techniques, interviews were tape-recorded, so that the original language, concepts and expressions of actors could be maintain in the content analysis. Nevertheless, even if for this purpose only tape-recorded material only was used, the elaboration of findings was complemented both by interviews or parts of interviews that were not allowed to be recorded and by secondary data, mainly coming from local press.
Only 16 out of 25 interviewees allowed either to dedicate us enough time to complete the interview on all the important aspects or to be tape-recorded. Therefore, for a correct and useful application of cognitive mapping, only these 16, who allowed making audio-tape recordings, entered the process of analysis (Table 1).

The process originated from semi-structured open-ended interviews, lasting from one to three hours each with the selected judgmental sample. Some core questions or themes, functional to the purpose of this study, were clearly formulated and others were left unstructured and open-ended, in order not to force interviewees in a predetermined path, but to lead them to reveal most of their cognitive map. Moreover, the interviewer, that for homogeneity of interpretation was only one for the all interviews, tried to avoid a technical and specific language/vocabulary, in order not to influence the conceptual categories used by interviewees. For instance, the term ‘industrial district’ was not used as a category by the interviewer until the interviewee himself/herself had used it first. As well, the purpose of this research was not revealed to interviewees so to avoid that this could influence their answers either over-stressing their detachment from the territory or the opposite. For the same reasons, during interviews, the intervention of the interviewer was reduced to the minimum, thus to stimulate the interviewees to reveal their thoughts as much as possible.

An interview protocol, built on the following themes, was used:

a) the structure of the local business system or value chain, in order to know more about agents involved, roles, critical points and geographical span of networks;

b) local institutions (business associations, trade unions, training and service centre, public administration, etc.) and their role in the creation, development and evolution of the local socio-economic environment;

c) networks, relationships and partnerships both at a business level and a social one, in order to identify the different kinds of exchange of information and knowledge;

d) the historical evolution of the local industrial environment in terms of firms and groups of firms transformation, modifications of the value chain, inflows and outflows of firms and prospect evolution/revolution of the local environment.

Interviews aimed at undermining the Ways-of-Thinking of each individual, which affects their decision-making process and their actions, in order to undermine both their sense of belonging to the industrial district and their collective Ways-of-Thinking through which they are supposed to socially construct the organizational context they are in.

Data Analysis

These interviews were transcribed into computer readable digitized format and then content analyzed to identify all the concepts used by each interviewee and the connotation attributed to them. Subsequently, again through content analysis of transcriptions, relationships amongst concepts and between these ones and their attributes were unraveled. No software support was used for content analysis. The coding of the associations of concepts was inspired both by Axelrod (1976) and by Huff, Narapareddy and Fletcher (1990). Four kinds of associations were investigated: positive effect, negative effect, belonging and connotation. The entire text was first read in order to understand the individual’s main points. During this phase obvious items were marked and at a second round concepts and relationships were identified. In order to avoid wording problems, coders stuck to the original wording of the text as close as possible, even if the excerpts included in the present paper had to be translated into English. A four-step-based coding protocol was applied: a) finding of the location of a relationship in the text; b) placing of components in sequence; c) identification of the nature of the relationship and assigning of a linkage code; d) selection of the portion of
the actual text to enter in the software. The latent content of the texts was addressed in this analysis, in order to capture the underlying meaning embodied in the text. Less attention was given to word frequency and syntax analysis. This approach raised a more complex concern for validity, since it depends to a greater extent on subjective interpretation and judgment. Reliability was increased through cross-checking measures among the coders. During the coding phase, a list of interpretative categories was also established by the coders. At the end of the process, coders agreed upon the coding of data in 92% of the cases, which is considered a reasonable interrater agreement (Yin, 1989; Kirk and Miller, 1986).

Basing on the concepts and the relations identified, cognitive maps were realized using the software Decision Explorer™. This software permitted to: enhance the graphical comprehensiveness of each cognitive map through the use of different colors and fonts for different kinds of concepts and relations; facilitate the identification of homogeneous areas among concepts, in order to conduct more precise analyses; elicit four kinds of relationships among concepts, assigning linkage codes (causal, connotative, temporal and belonging relationships); conduct specific analyses (centrality and domain, in our case).

Firstly, the domain analysis and the centrality analysis were applied to the entire cognitive map of each individual. The domain analysis examines each concept and calculates how many concepts are immediately related to it (i.e. directly linking in or out of the concept). Through this, it is possible to be able to identify which concepts are the best elaborated or have a high density of links around them. The centrality analysis allows a similar calculation to that of domain density to be carried out. However, this analysis calculates the results using more than one level, i.e. not just those concepts that immediately link into specified concepts, but also those which link through them. This provides some insights into discovering the centrality of the concept in the whole model rather than just its immediate vicinity. For each one of the interpretative categories established before, the domain analysis highlighted a key concept in each map, basing on an assessment of the density of each concept, i.e. their number of in-going and out-going relations. A concept in a mental map was considered to be denser than another one when it is a node for a high number of in-going and out-going relations compared to others. Then, for each key concept identified an exploration of its immediate domain was performed through the ‘explore’ function of the software. The comparison of this immediate domain and the interpretative categories defined in the coding phase permitted to identify several sets of concepts and relations. A set is a method of managing and organising concepts in the map. Sets can comprise any concepts or slices of the map that seem appropriate, the most common requirement being that of coding the concepts to relate to particular aspects of the model. These homogeneous areas, investigated in all the 16 cognitive maps, were coded in specific sets of concepts, compliant both with the emphasis attributed by interviewees to some aspects (categories) and the results of the domain analysis applied to each individual map.

The following sets were identified: weaknesses of the local business system/territory [weak], strengths of the local business system/territory [strong], local information exchange processes [info], mindset, experience and background of local actors [mind], lack of sense of belonging to the industrial district [non-sb], sense of belonging to the industrial district/territory [sb] and emphasis on individual values as opposed to community-based values [indiv]. Centrality analysis was applied to key concepts of each set to verify their relevance in the whole cognitive map. Some key concepts were present in more than a set, being crucial nodes for the sense-making process of agents. The centrality analysis, applied to each set confirmed this point. Some cognitive maps did not include the totality of sets identified: a few were lacking the [non-sb] set, others the [sb] set and some others the [indiv] set.
Through the use of Decision Explorer™ several worksheets for each one of the 16 interviewees were produced: a worksheet representing the entire cognitive map of each individual, without reductions or cuts (Appendix 1 to 16); one summing up the list of concepts emerging from the content analysis of texts; one with the list of sets included in that specific map and the concepts relating to every one of them; one with the results of the domain analysis applied to the entire map; one with the results of the centrality analysis applied to the entire map (these last two worksheets were organized as decreasing-order lists of concepts, respectively based on density and centrality.); several worksheets reporting the domain analysis and the centrality analysis, applied to each set present in that specific map. Concepts, resulted to be present in more than one set, were analyzed in-depth through the ‘consequences for a set’ analysis that enables a check to be run between specific sets of concepts to determine whether there are any instances where the second set contains concepts that are consequences of the first. This analysis (called CSET in the software) checks along a path of argument for the consequences rather than just examining the immediate concepts. CSET enables a check to be run between specific sets of concepts to determine whether there are any instances where the second set contains concepts that are consequences of the first.

EMPIRICAL FINDINGS

The sense of belonging of individuals

The exploration of individuals’ cognitive maps highlighted those showing a sense of belonging towards the industrial district and those not showing it. In particular, it has been possible to split interviewees in three different groups with reference to their sense of belonging to the industrial district:

- those with a strong sense of belonging to the industrial district;
- those with a marked lack of the sense of belonging to the industrial district;
- those with more fuzzy cognitions about their sense of belonging to the district, even if with a clear indication of being closer to those who do not have the sense of belonging than to the others.
Cognitive constructs referring to individuals’ sense of belonging or lack of sense of belonging were singled out within the thematic sets [sb] and [non-sb]. Nevertheless, in some cases, especially for those individuals comprised in the third of the groups indicated above, indications regarding their sense of belonging were found in other sets as expressed by the combination of several constructs connected together.

Amongst the 16 interviewees, only four of them markedly showed their sense of belonging to the industrial district. Even if this is not the case that quantitative reasoning matter (4 out of 16), the analysis of these four cases, and in particular of their sets [sb], [info] and [mind], allowed a better understanding of their position. These individuals, in fact, were members of local institutions, two of them as executives of business associations and the other two as entrepreneurs highly involved in business associations and unions as elected representatives. This suggested a relationship between those who act at an institutional level in the industrial district and those who show in their cognitive maps a stronger sense of belonging to the territory and the district. An excerpt from these cognitive maps, shown in Figure 1, visibly figures out these aspects: the sense of belonging towards the area of Como, the idea that Como is still to be considered an industrial district and the dominant role of local associations and institutions, in general, in reinforcing such self-fulfilling prophecy.
Five interviewees, that during the sampling process have been identified as being key actors and experts of the industrial district of Como showed in their cognitive maps a dramatic lack of the sense of belonging to the industrial district, undermining at the same time a set of beliefs opposed to the idea of industrial district (such as: individualism, mistrust, detachment from local issues, etc.). An excerpt from these cognitive maps is shown in Figure 2. 

Through the analysis of the sets [non-sb], [weak], [info], [mind] and [indiv] identified in the cognitive maps of these five interviewees, the reasons for a lack of their sense of belonging to the industrial district have been pointed out (see Figure 2 above, in particular):

- scarce networking among firms: even if some localized networks of firms are identifiable, especially between a leading firm and a group of subcontractors, what seems lacking, according to some interviewees, is what Biggiero (1997) called hyper-networks, i.e. networks of networks that are supposed to connect the industrial and institutional tissue of an industrial district;
- lack of integration among local associations: their role of catalysts and meta-organizers seems to be vain, due to the fact that they do not manage properly communications among them and with business actors;
- cultural closure and individualism: while industrial districts are nowadays facing important challenges from globalization, open boundaries, new technologies, etc., the business actors of Como seem to rest upon a historical and cultural sediment formed in hundreds of years, where the revealing culture is based on individualistic and close artisan ways of doing business;
- transaction-based relationships: finally, the analysis of the empirical findings from the district of Como showed that one crucial determinant of this progressive lack of identification with the environment is traceable back to the prevailing nature of business relationships, that seems mainly transaction-based, and not based on stable strategic relationships. ‘Transactions’ are here meant as pure exchanges of goods,
services or components (client-supplier relationship), while ‘networking’ (as widely depicted in literature on industrial districts) is supposed to bring with it exchanges of information, skills, knowledge and shared projects. Only a more sophisticated kind of relations among local actors is, in fact, assumed both by the epistemological approach we moved from and by industrial districts’ literature to be determinants of shared beliefs systems, and thus antecedents of a socially constructed environment.

Figure 3. Excerpt from the cognitive map of Interviewee # 8

The rest of the interviewees (seven individuals) did not show in their cognitive maps neither a sharp [non-sb] set nor a [sb] set. Nevertheless, through a thorough analysis of the other sets present in their cognitive maps, a sort of detachment from the territory and the district, together with a disillusion to act as a system and generalized sense of pessimism were clearly recognizable. An example of the Ways-of-Thinking expressed by this group of individuals is shown in Figure 3. For the reason that these seven interviewees resemble much those who completely lack a sense of belonging to the district, in the aftermath the two groups will be considered together.

Collective Ways-of-Thinking

This section reports some excerpts of the comparison made amongst individual Ways-of-Thinking. The comparison was possible, as illustrated above, first through the identification of core constructs in each individual map and second through the examination of similarity patterns amongst those constructs. This analytical process constituted the basis for a more holistic comparative analysis of single cognitive maps, searching for the existence of collective Ways-of-Thinking. Hereafter, some excerpts taken from the most evident shared beliefs and the most evident unshared are presented and then broader considerations on the existence of collective Ways-of-Thinking are derived.

Three examples of the very few shared cognitions identified are deemed representative of the cognitive analysis conducted. Quotations taken from transcripts of interviews are used as a means to express them.

(a) The rule of condo.
«[...] the sole relationships that are possible among firms have a commercial nature, like the ones between suppliers and buyers, no information is shared, neither knowledge [...]»

«[...] poor relations lay at the basis of the recent crisis and in general they are the determinants of an intense and progressive fragmentation of the production chain [...]»

«[...] we are inspired by the golden rule of condo: don’t confide anything to your neighbors and don’t treat them with familiarity [...] it is like living in the same building, everyone in his flat, everyone fed up with the misbehaving of the others, everyone ignoring the others [...] and like in a building sometime we meet all together to discuss our problems, but the result is that we are not sincere and we get out of those meeting with more problems than before.»

«[...] our relationships are forced by the fact that we produce not finished goods and so we have to work together, it’s like staying in the same flat [...] you know flat mates sometimes are forced to live together but this doesn’t mean that they want to live together [...]»

«how can we cooperate when we compete? Everyone is copying the secrets of the others [...]»

(b) People from Como are individualistic.

«People from Como and cooperation are two terms are poles apart [...]»

«I support the individualistic pride of being from Como [...]»

«[...] everyone is focused exclusively on his business [...] why should I bother about the others?»

«Unfortunately yes! Most of my colleagues are individualistic, but [...] we are entrepreneurs, this is how it goes [...] it’s our nature even if we should cooperate more [...]»

(c) Institutions are at center stage in our activity.

«Despite we all know that our associations are useless, I think that an institutional support is deemed necessary in our business [...]»

«Local institutions, such the associations, strive for establishing strong and durable relations amongst firms [...]»

«Only business associations could help us in inverting the course of events we are facing [...] they have the important role of integrating the production chain»

The above examples of shared beliefs and the quotations reported qualify shared cognitions amongst individuals. The few cognitions which are shared (such as the ‘rule of condo’ and the ‘people from Como are individualistic’) qualify the enactment process in a
way which is not beneficial to the fruitful existence of the industrial district. As a matter of fact, the thinking and acting of individuals operating in Como will be guided by the belief of being individualistic and not to cooperate or expect cooperation from others.

Additionally, if we focus on unshared beliefs, we found a multitude of cases. Five excerpts are chosen here to be representative of the cognitive analysis conducted. In particular, we chose those cognitions referring to the crisis that affected the textile industry located in Como and those regarding recipes for the future, so to enhance our sensemaking on the way individuals in Como are constructing or deconstructing the industrial district. As shown above, quotations taken from transcripts of interviews are used as a tool to express cognitions.

(a) The responsibility of local business associations in the crisis.

«[…] our business associations are responsible for what has happened, they should have know that!»

«[…] when we come to discuss the reasons for our inability to act as a cohesive group, we cannot ignore the weak support we receive from our associations […]»

«[…] business associations failed their main goal, i.e. to become a common arena for discussing solutions for the future and for recovering from this crisis.»

«we are lucky because our association has helped all of us in facing the crisis […]»

«[…] our associations are the expression of our needs, they prevent the misfunctioning of the entire production chain […]»

«Unfortunately not many entrepreneurs confide in the role of business associations operating in Como for the restart of our competitiveness […]»

(b) The importance of pursuing collective strategies.

«[…] I don’t know anything about this project you are referring to […] it should be another way associations have found to justify their existence»

«If we think about the idea of promoting an integrated network of firms in Como […] well, the important think is to know in advance who will benefit from it and who won’t […]»

«I totally support the idea of creating an integrated network of firms in Como, we need it, we are too sparse while we should act together»

«[…] yes yes I have seen the commercial on the campaign to create an integrated network of firms […] I just wonder why we didn’t think about it before, we need to act collectively to face the crisis»

(c) Training, learning and professional skills.

«[…] workers don’t know anymore how to do things»

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«We are now employing people who do not have the skills we require, but there is no choice!»

«our area comprises several institutions which support the training of our personnel and the continuous update of our knowledge [...] the University of Como for instance is starting a bachelor in industrial design and another one in textile chemistry [...] then the Tessile di Como and Enfapi prepare specialized workers [...]»

«There is no way we people skilled for this job [...] in the past we used to have specific schools, but nowadays this support from institutions is missing»

(d) Networking.

«Networking should emerge as natural amongst firms who continuously interact exchanging goods and services [...]»

«[...] we will never manage to network in this area, moreover, what’s for? The situation we are facing is dramatic, why bother about the others?»

«Networking, seriously networking, not like we do now, will be our way out of the crisis!»

«[...] you can only dream of networking here in Como [...] it’s impossible, you know, it’s just imagination!»

(e) Recipes for the future.

«The critical factor for our success will be the growth of firms, we need larger firms to face the competition»

«We need networking to face the future [...]»

«[...] business associations are fundamental engines for local development [...]»

«Small is still beautiful! We have to leverage our peculiarities [...]»

«[...] less artisans and more managerial and international firms, that my suggestion!»

The above quotations reveal a situation where totally idiosyncratic cognitions prevail. The interviewees, all operating in Como since several decades, thus sharing similar experiences, have surprisingly developed idiosyncratic Ways-of-Thinking, where central issues such as the reasons for the recent crisis and the recipes for the future are unshared, thus revealing a multitude of constructing realities, each one at odds with the others.

The picture that emerges from the analysis recognizes two main, even if weakly defined, collective Ways-of-Thinking, which might enact two different and contrasting socio-economic environments.

The first kind of way-of-thinking recognized in most of the interviewees characterizes those individuals who have not a sense of belonging to the industrial district, thus their thinking and acting is oriented towards not considering the industrial district as a relevant socio-economic context (district opponents). These individuals, according to the paradigm
adopted in this paper, are socially de-constructing the industrial district of Como, enacting several different realities which are far from the canonical industrial district.

Individuals suggesting this collective way-of-thinking have a heterogeneous profile, thus comprising individuals with very different Ways-of-Thinking, even if with some common treats. Some of them started to operate in the silk industry during the economic boom of past decades, thus in a situation which encouraged the pursuing of business opportunities without any effort. Individuals belonging to this group started their business finding a beneficial position in the fragmented production chain of Como and specializing in particular phases or operations.

They benefited from the favorable external situation and enhanced their specializations to extremes, engaging in inter-firm relations just as a consequence of their positioning in the entire filière. Through time, such transactions between firms became consuetudinary and institutionalized and the fragmentation of the production chain in Como started to be perceived as an integrated system of firms with intense business relations. Nevertheless, such transactions – which were more similar to supplier-buyer relations rather than to effective cooperation – brought only to the sharing of a production process instead of sharing information, values, beliefs, worldviews and objectives as well. As time passed by, new actors entered the industrial district of Como, new competitive forces appeared on the scene and progressive crisis affected the entire production chain. This revealed the fictitious relations amongst these actors, highlighting their individualistic way-of-thinking and their orientation towards only supplier-buyer relationships. Together with this group the first kind of way-of-thinking is also populated by those individuals who entered the silk business several decades ago and who used to have a sense of belonging to the district – according to the analysis of their cognitive maps. These are amongst the oldest members of the district, which might have gradually changed their way-of-thinking through time, being influenced by a progressive fragmentation of the industry, the failure of many colleagues and a generalized economic crisis.

Further, individuals within this first group, attribute to local business associations some responsibilities for the incapacity of local firms to get out of the crisis and blame business associations’ services and roles.

Additionally, this first way-of-thinking is characterized by a sort of pessimism towards the future of the district and a strong melancholic anchorage to the past which will never come again. This means that this group of individuals, which constitutes the vast part of interviewees, is basically reluctant to figure out possible recipes (Spender, 1989) for the future and react with less enthusiasm to collective strategies, such as the ones promoted by the a local business association.

The second way-of-thinking that emerges from the present study is definitely much less populated in our small sample of interviewee. They show a more homogeneous way-of-thinking compared to the previous group. This second group is characterized by a strong sense of belonging to the district, an active participation in local institutions and a positive attitude towards cooperation and mutual support. They recognized the industrial district as existing and operating since some centuries ago and they enact through their thinking and acting the industrial district in their every day life. Localization advantages matter for them, even if they also perceive the importance of opening out the geographical boundaries of the district. Their common credo is “together in the district we are stronger”. This second collective way-of-thinking seems to be quite unlikely amongst individuals operating in the district of Como, but still beneficial for the rebirth of the district. We called this second ones district enthusiasts.

The above illustration of the Ways-of-Thinking characterizing the industrial district of Como is obviously oversimplified with the purpose to typify them in order to derive
theoretical and empirical implications. At an individual level Ways-of-Thinking are all idiosyncratic, even if they can be grouped to identify two macro collective Ways-of-Thinking. The vast majority of interviewees show to be district opponent, while four of them are more district enthusiasts. The boundaries between these two collective Ways-of-Thinking are blurred.

DISCUSSION AND CONCLUSIONS

Main contributions

The paper has illustrated the potential of a cognitive constructionist approach in the investigation of industrial districts, bringing in a fresh look at the phenomenon. Quite recently, a few scholars from management entered such conversation, conceptualizing industrial districts as enacted environments and concentrating on a cognitive perspective with individuals as a unit of analysis (Borroi et al., 1998; Cillo and Troilo, 1997; 2002; Viteritti, 2000; Alberti et al., 2001a). The main contribution that the present study can offer to that conversation derives from the answers given to the research questions.

By not taking a realist perspective, but rather a constructionist perspective, the paper represents a moving away from the concept of industrial district as an objective environment, which means considering the characteristics proposed by the canonical literature as insufficient to express what makes a local productive system an industrial district. Focusing on the sense of belonging and the Ways-of-Thinking of individuals, the paper has been concerned with how individuals assign meaning to their belonging to the district and socially construct it, enacting the district (Smircich and Stubbart, 1985; Weick, 1979; Berger and Luckmann, 1967).

The sense of belonging, meant as the consciousness of local individuals to belong to a specific industrial district (Becattini 1987: 39), has had an important role in the canonical definition of industrial districts yet not attracting that considerable research effort that other topics received. To this regard, the present study contributes in dismantling the assumption that the physical belonging to an industrial district implies the psychical belonging to it. Further, this study shows how the lack of the sense of belonging of individuals might affect their acting, thus inducing a progressive detachment from it, fostering individualism and competition rather than cooperation and trust.
Whilst most of the literature on industrial districts (apart Cillo and Troilo, 2002) has implicitly admitted a positive answer to this research question, the answer the present study proposes to this question is definitely negative. The empirical investigation of the industrial district of Como allowed a clear separation between the physical belonging of individuals to the territory, which is actually occurring, and their cognitive belonging, which is not occurring. The latter, in fact, emerged to be absent in most of the interviewees which more or less clearly showed through their Ways-of-Thinking their weak sense of belonging to the district of Como. The answer to such question constitutes what is maybe the most important result of the present study, since according to the literature on industrial districts (Becattini, 1987; 1989a; 2002) the sense of belonging, or the consciousness, of individuals has a crucial role in affecting industrial districts in terms of industrial atmosphere, inter-personal trust, inter-firm cooperation and social embeddedness, which are seen as the qualifying attributes of such socio-economic environments.

Further, each interviewee demonstrated to have a unique Way-of-Thinking with regard to the industrial district. In order to allow a clearer and neater analysis of individual Ways-of-Thinking, beliefs of each individual have been divided in thematic sets, thus providing a specific analysis for each individual comprising its entire cognitive map (in the original language of the interview, i.e. Italian) and a card subsuming the main connotations of each individual Ways-of-Thinking. The study proved that, rather than finding a prevalence of common worldviews as industrial districts’ literature would have suggested, interviewees have more or less idiosyncratic Ways-of-Thinking. This provided a clear evidence of the poor extent to which interviewees do share their belief systems and thus their Ways-of-Thinking. The result was a fragmented situation where idiosyncratic individual Ways-of-Thinking markedly prevailed on collective Ways-of-Thinking. Yet, moving to a more abstract level of analysis each single idiosyncratic Way-of-Thinking might be brought back to two broad collective Ways-of-Thinking: one, prevailing among interviewees, characterized by a lack of sense of belonging and a detachment from the local socio-economic context; and another, characterized by sense of belonging and commitment towards the district. Hence, the answer to this research question sheds also light on the fact that collectively several interviewees are enacting an environment which is far from an industrial district and that, at a more detailed level of analysis, resembles a multiplicity of idiosyncratic environments.

Shared cognitions are again implicitly assumed to occur in industrial districts (e.g., Becattini, 1989a; 1989b) as a consequence of frequent and close interactions among individuals (Gray et al., 1985) which foster the development of collective cognitions through processes of sensemaking and sensegiving (Ericson and Melin, 1999; Gioia and Chittipeddi, 1991). To this regard, the present study contributes in showing how individuals, experts in this case, operating within an industrial district might even show to have totally idiosyncratic Ways-of-Thinking, i.e. different values, assumptions, beliefs, ideas and thoughts about the industrial district. Hence, if collective Ways-of-Thinking (Ericson and Melin, 1999) reveal the way a social reality is constructed, the prevalence of idiosyncratic Ways-of-Thinking and a generalized way-of-thinking centered on the lack of sense of belonging to the district of Como might reveal the way the district is de-constructed (Gray et al., 1985), i.e. not enacted anymore by individuals in their thinking and their acting (Weick, 1995).

These two elements, deriving from a cognitive constructionist view of industrial districts illuminate the concept of industrial district itself, contributing to a fine-tuning of its definition, which should reserve to the cognitive dimension of industrial districts, and to the ‘sense of belonging’ in particular, a more central role.

Finally, this study makes also an empirical contribution: filling the gap of the cognitive dimension of industrial districts, the analysis we conducted provides valuable understanding of the industrial district of Como. So far, industrial districts, and Como as well, have been
mainly analyzed focusing on their localization patterns, number and type of firms, institutional actors, local resources and facilities, and on their organizational morphology of inter-firm and inter-personal networks. In this respect, the industrial district of Como shows a progressive weakening of its local structural features in terms of number of firms and supporting institutions, an increasing vulnerability in competitive respects and an impoverishment of inter-firm and inter-personal relations which are reduced to mere transactions. The account of individuals’ cognitions in the district of Como illuminates the «elementary processes» (Becattini, 2002: 489) by which the district is composed, suggesting a link between «the productive structure of the local system with the psychological features of its inhabitants» (Becattini, 2002: 489).

Even if it is difficult to state whether the cognitive dimension of the district has negatively affected its competitiveness, its entrepreneurial tissue and its relational architectures or vice versa, the study shows how individuals are currently enacting idiosyncratic environments thus further contributing to the cognitive and physical deconstruction of the district of Como.

**Limitations**

All results and conclusions presented in this paper should be interpreted with caution, due to the limitations characterizing this research.

*First*, the present study does not permit to investigate the process of meaning creation within the industrial district in longitudinal terms. The evidence provided by this study shows a lack of sense of belonging and the prevalence of idiosyncratic Ways-of-Thinking in the district of Como. Even if such evidence has proven to be contributing to the theoretical and the empirical field it shows a limit in the understanding of the change process in the cognitive dimension of individuals. The limit was determined by the will to use primary data derived from interviews, as suggested by managerial and organizational cognition scholars (Eden et al., 1993: 2) and the lack of available data on a sufficient longitudinal base. A longitudinal approach would have required several interviews distributed through time, which is still a possibility for future elaborations of the present study, but no interviews or other primary data collected in the past were available for tracking individual cognitions’ change processes. A second best solution to extend the present study on a longitudinal base might be to use historical secondary data from which cognitive maps could be derived. These might be public speeches, company documents or interviews from magazines. To this regard the study made by Melander (1997) on the belief structure of the Swedish pulp and paper industry constitutes a methodological contribution about the use of secondary archival data in longitudinal cognitive studies.

*Second*, a limitation concerns the choice of the empirical focus, which in this case was the industrial district of Como. The district of Como is undergoing a strong structural crisis, affecting its national and international competitiveness, its internal structure and the socio-economic profile of the area. This particular condition of the industrial district of Como might have affected the cognitions of interviewees, thus erroneously inducing to stress their lack of sense of belonging and their fragmentation of cognitions. This, of course, does not have to occur as a straight-forward consequence of an industry crisis. Hellgren and Melin (1993), for instance, have proven that individual Ways-of-Thinking are quite stable through time, as sediments of experience in the field. Thus, they exclude the possibility that entering an industry crisis may allow a radical change in individuals’ Ways-of-Thinking. On the contrary, scholars concerned with the social construction of industries and markets (Nicolas, 1999), together with neo-institutional theorists (Meyer and Rowan, 1977; DiMaggio and Powell, 1983) warn about the fact that a crisis situation may be echoed by industry experts, advisors,
analysts and industry press, thus fostering a rapid process of transformation in the individual and collective system of meanings and beliefs.

Nevertheless, as said above, the lack of cognitive material on a longitudinal base does not allow understanding if the belief system of the district of Como has actually changed or if it has been like this through time. Likewise, the present study does not permit to understand if there is a causal relation between the crisis and the belief system and if the crisis is a determinant of particular belief system or vice versa.

**Implications for theory**

At a conceptual level, this research has tried to contribute to an enrichment of the variety of approaches to the study of industrial districts, suggesting that the cognitive dimension of the economic activities undertaken within an industrial district have to be taken into serious consideration to understand industrial districts’ formation and development.

**Figure 4.** The ongoing enactment of contexts

The field of industrial districts’ research has extensively founded its attention on the economic, geographic and technological features of an industrial district as well as on the features and behaviors of district firms and their relations. Hence, using the language of scholars concerned with change in industrial structures (e.g., Hellgren et al., 1993; Fombrun, 1986; Melander, 1997), industrial districts’ literature has focused mainly on what might be called the *infrastructure* of a context (i.e., its technological, economic and organizational structures) and its *relational structure* (i.e., the relations and communications among firms and individuals). What has been highly disregarded is the *belief structure* of an industrial district, which, according to the scholars mentioned above, constitutes the third dimension around which the development of each context revolves. Contexts are seen as emerging from the homogenization of three dimensions: infra-, relational and belief structures often forming a circular relationship in which the homogenization in one type fosters homogenization in the other two, and vice versa. The analytical use of the concept follows Fombrun (1986) who
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argues that structures are to be seen as a temporary configurations of infrastructures, relational structures (sociostructures à la Fombrun) and belief structures (superstructures à la Fombrun). These are different types that either emphasize physical objects, patterns of routinized actions or patterns of routinized Ways-of-Thinking.

These three structures are closely dependent on their intertwined natures. A community of people and a population of firms that interact (i.e., relational structure) often homogenize their infrastructures and their values, but not necessarily in that order. Any definition of the starting point of this process can only be undertaken on an empirical basis. Porac et al. (1989) use the term ‘enactment process’ (Weick, 1979) to describe how a belief structure is sustained by the choice of actions undertaken. Beliefs tend to become often expressed in more materialized forms, i.e. infrastructures or relational structures. This is in line with neo-institutional approaches (Scott 1991; 1995; Haunschild and Miner, 1997; DiMaggio, 1990; DiMaggio and Powell, 1991); according to these, contexts are seen as the outcome of a this «process by which a given set of units and a pattern of activities come to be normatively and cognitively held in place, and practically taken for granted as lawful (whether as a matter of formal law, custom, or knowledge)» (Meyer et al., 1987: 13). In Figure 4, the relationship between the three structural dimensions is described.

The evidence collected in this study completes the view of industrial districts as socio-economic contexts, introducing an ‘ideological dimension’ (Hellgren et al., 1993: 92) in the study of industrial districts. Such ideological or cognitive dimension represents the socio-constructionist perspective (Berger and Luckmann, 1967) of industrial districts and focuses on cognitive and cultural processes and structures. «This view suggests that the environment is enacted through social construction and subjective sensemaking or ‘cognitive environments’ […] Individual and collective belief systems are stressed through this dimension. The understanding of structure within an industry is socially constructed through interactions between human actors […] Industries are viewed as cognitive constructions […] Actors are continuously involved in the production and reproduction of social reality, which means that industrial structure takes form through interactive sensemaking» (Hellgren et al., 1993: 92).

**Figure 5.** The progressive de-construction of the industrial district of Como
Further, this study suggests that the concept of industrial district should not necessarily be associated with an area with high levels of social networking and collective beliefs. A common denominator in the literature on industrial districts is the assumption of high levels of social capital qualifying them (Putnam et al., 1993). Social capital (trust and networking) lowers transaction costs in industrial districts, since social networks lower search costs and trust supports coordination among firms (Woolcock, 1998). This proved not to be the case of Como.

Implications for practice

When it comes to apply these considerations to the empirical field considered in this study, the evidence collected (Alberti, 2002b) shows how the industrial district of Como is characterized by a progressive weakening of its infrastructure (delocalization, failures, weak competitive performances, fragile institutional supports, etc.) and a problematic relational structure, characterized more by supplier-buyer transactions imprinted by individualistic behaviors, rather than by cooperative and trust-based inter-firm and inter-personal relations. The cognitive analysis has illuminated the situation showing a concurrent weakening in its belief structure which is characterized both by the presence of idiosyncratic Ways-of-Thinking and by a general collective Way-of-Thinking revolving around the lack of sense of belonging.

According to the framework introduced above, and shown in Figure 4, such characteristics of the belief structure might be connected to the one of the infrastructure and the relational structure. In other terms, the weak belief structure of the district of Como is accompanied by a weaker infrastructure and a weaker relational structure.

It seems like individuals operating in the district of Como, faced by an increasing competition from abroad, a dramatic recession in sales and their attitude towards individualistic behaviors have enacted an impoverishment of the relational structure, privileging only supplier-buyer relationships and disregarding more intimate and strategic relations with other actors. This seems in line with the suggestion by Rullani (1997) who argues that cooperative behaviors are diffused in industrial districts when the environmental variability is stable or cyclical, but when structural or radical changes occur in the environment, cooperative behaviors are substituted by more competitive and individualistic behaviors. Such impoverishment of the relational structure might have enhanced the impoverishment in the infrastructure, again increasing pessimistic Ways-of-Thinking amongst individuals. This is also in line with the conclusion by Melander and Nordqvist (2002) on their study of the Swedish furniture industry. They show how shared beliefs not supporting either trust or networking prevent social learning and social networking, bringing to a poor base for accumulation of social capital and, hence, to economic development.

The non-longitudinal nature of this study does not permit to understand if this process started in the belief structure, thus in individuals’ cognitions which enacted different infra- and relational structures or in one of the other two structural dimensions. Nevertheless, this is actually less important than understanding how to interrupt such vicious circuit which is bringing, according to this study, to a progressive deconstruction of the industrial district of Como (see Figure 5).

Several authors (e.g., Abrahamson and Fombrun, 1994) have shown how frequent and close interactions among individuals bring to the sharing of a set of common beliefs, which enable them to function successfully as a group. Hence, one way to work on the cognitive dimension of the district of Como, fostering a wider sharing of values and beliefs oriented
towards the enactment of the district, could be found in ‘collective encounters’ (Langfield-Smith, 1992).

Collective encounters are situations where individuals of a group may have the opportunity to discuss issues that are of concern to the group, communicate problems, explore possible outcomes of actions, test and debate the theories in use. These do not have to be formal forum, but events where shared feelings are collectively experienced by the group.

Quite recent projects ongoing in the district of Como, such as the start up of a web marketplace or the establishment of a collective quality brand, might become seedbeds for the development of shared visions and beliefs, thus fostering – through social learning on joint projects – the accumulation of social capital. This argument is supported by Melander and Nordqvist (2002) who show that social interaction initially installed for economic purposes can «trigger local learning processes, influencing social capital shareholders to gradually change beliefs and invest in social capital» (p. 103). In other terms, new arenas for network activities (Wigren, 2003) playing as collective encounters are likely to be more efficient than policies oriented towards changing institutional beliefs directly (Melander and Nordqvist, 2002).

Figure 6. The role of collective encounters for the re-enactment of the industrial district of Como

Source: elaboration on Langfield-Smith (1992)

The minor collective way-of-thinking identified by this study (i.e. the one emphasizing the importance of the district and the sense of belonging of individuals) might provide the basis upon which collective encounters could work. Far from being an easy solution to interrupt the vicious circuit ongoing in Como, collective cognitive encounters might legitimize a renovated role for local business associations, which should concretely facilitate interactions, argumentations, negotiations and the production of collective Ways-of-Thinking beneficial to the district (see Figure 6). The restoring of a belief structure which could foster a collective enacting of the industrial district could, in turn, affect both the infrastructure and the relational structure of the district, to facilitate its re-construction.

This reflection is not for stating that a complete homogenization in the beliefs of individuals operating within an industrial district is unconditionally beneficial. Scholars (e.g.,
Abrahamson and Fombrun, 1994) have warned about the risk of totalizing macrocultures and even industrial districts’ scholars (e.g., Grabher, 1993) have been concerned with the negative consequences of a total homogenization of individuals’ beliefs. Hence, this suggests a balance between the existence of collective Ways-of-Thinking, which are beneficial in order to socially construct a shared context, and the preservation of individual Ways-of-Thinking which could prevent from cognitive lock-ins (Grabher, 1993).

In general, the conclusions of the present study and the practical considerations elaborated for Como, in fact, might be useful for those managers, entrepreneurs, policy makers and advisors concerned with the fostering of industrial districts’ birth and development.

**Suggestions for further research**

Berger and Luckmann’s (1967) sociology of institutions suggests that de-institutionalization may happen when dissonance emerges between social reality and repeated outcomes of practice. This indicates a first line for future research. In fact, in contrast to the prevailing literature on industrial districts that views them as static structures, this study proposes that industrial districts are better understood as dynamic, conscious and subconscious processes through which meanings are constructed and destroyed (Gray et al., 1985). At an extreme, meanings are entirely idiosyncratic and, similar to the case studied in this study the industrial district is likely to be deconstructed by individuals. At the other extreme, meanings are so deeply internalized by most of members that they are not consciously questioned. This situation is typically expressed by a high degree of cognitive embeddedness and in some cases may turn out to be a ‘cognitive lock-in’, as Grabher (1993) pointed out. In between, meanings are widely held and dynamically change through time allowing a constant flux of modifications in the industrial district’s structure. Along this line, future research may explore the organizing of industrial districts in a dialectic way, thus focusing on the processes of achieving and erosion of coincident meanings. More precisely, the process of ‘disorganizing’ has received considerably less attention in management literature and in industrial districts’ literature, than has organizing. Hence, a first and main path for future research could focus on industrial districts’ disorganizing, bringing in a cognitive perspective. This is in line with the recent suggestions made by Becattini (2002: 489), who argues: «[…] I view ‘districtualization’, or conversely ‘de-districtualization’, as the constant modulation in time and space of a set of processes, and not as a punctiform event […]».

A second line for future research, which builds on the previous one, refers to the extension on a longitudinal base of the study reported in this paper. As considered above in the section referring to limitations, the process of development or of disappearing of a sense of belonging is of interest. How do individuals come to develop their sense of belonging to the industrial district? How do they come to lose their sense of belonging? Which is the process by which individual and collective Ways-of-Thinking change through time? Thus, to use the words of Becattini (2002: 489) again, «the formation and reproduction of a ‘sense of belonging’ to the district» in processual terms is of interest for future studies.

**Third**, considerably more research should empirically address the so-called canonical industrial districts with a cognitive constructionist approach, in order to extend the variety of the theoretical considerations made in the present study and to empirically contribute to the understanding of those empirical cases.

**Finally**, this study has suggested that coincident meaning depends upon the same Ways-of-Thinking or the presence of similar cognitive maps. Nevertheless, some psychologists and linguists (Cf. Gray et al., 1985) argue that much, if not all, meanings are derived from tacit knowledge structures, which can only be inferred from cause maps, but lay
at an unconscious level in the thoughts and emotions of individuals. This calls for methodologies able to capture such tacit value systems of individuals, in order to study meaning construction and destruction.
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Appendix 2. Cognitive map of Interviewee # 2
Appendix 3. Cognitive map of Interviewee # 3
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