



Journal of Workplace Learning

The formation of germ cell for organizational learning
Silvia Ivaldi Giuseppe Scaratti

Article information:

To cite this document:

Silvia Ivaldi Giuseppe Scaratti , (2016), "The formation of germ cell for organizational learning", Journal of Workplace Learning, Vol. 28 Iss 4 pp. 224 - 244

Permanent link to this document:

<http://dx.doi.org/10.1108/JWL-01-2016-0004>

Downloaded on: 11 November 2016, At: 02:09 (PT)

References: this document contains references to 60 other documents.

To copy this document: permissions@emeraldinsight.com

The fulltext of this document has been downloaded 90 times since 2016*

Users who downloaded this article also downloaded:

(2016), "Carnivalization as a new mode of collaboration", Journal of Workplace Learning, Vol. 28 Iss 4 pp. 188-205 <http://dx.doi.org/10.1108/JWL-11-2015-0084>

(2016), "Work transformation following the implementation of an ERP system: An activity-theoretical perspective", Journal of Workplace Learning, Vol. 28 Iss 4 pp. 206-223 <http://dx.doi.org/10.1108/JWL-01-2016-0005>

Access to this document was granted through an Emerald subscription provided by emerald-srm:563821 []

For Authors

If you would like to write for this, or any other Emerald publication, then please use our Emerald for Authors service information about how to choose which publication to write for and submission guidelines are available for all. Please visit www.emeraldinsight.com/authors for more information.

About Emerald www.emeraldinsight.com

Emerald is a global publisher linking research and practice to the benefit of society. The company manages a portfolio of more than 290 journals and over 2,350 books and book series volumes, as well as providing an extensive range of online products and additional customer resources and services.

Emerald is both COUNTER 4 and TRANSFER compliant. The organization is a partner of the Committee on Publication Ethics (COPE) and also works with Portico and the LOCKSS initiative for digital archive preservation.

*Related content and download information correct at time of download.

The formation of germ cell for organizational learning

Silvia Ivaldi

Faculty of Sociology, Catholic University, Milano, Italy, and

Giuseppe Scaratti

Faculty of Economics, Catholic University, Milan, Italy

Received 21 January 2016

Revised 29 March 2016

Accepted 30 March 2016

Abstract

Purpose – The aim of the paper is to analyze the process of “germ cell” formation by framing it as an opportunity for promoting organizational learning and transformation. The paper aims to specifically answer two research questions: Why does the “germ cell” have a pivotal role in organization’s transformation? and Which conditions facilitate the formation of the “germ cell” in the management of complex and uncertain problems?

Design/methodology/approach – The paper answers the research questions first by presenting the literature related to knowing and learning inside organizations, and second by introducing the concept of “germ cell” and connecting it with the metaphors of “waiting experiment” and “anchoring forward”. Finally, the paper analyzes the steps by which the “germ cell” is shaped, thus owing to the exploration of problematic situations, underpinning the “germ cell’s” role to open perspectives for multiple applications and development. Two research interventions are presented by focusing on the construction of the “germ cell” moving from the problematic situations to promote organizational learning and change.

Findings – The paper describes the formation of the “germ cell” as a process that opens possibilities for subjects to recognize and reflect on the recurrent and taken-for-granted practices and concepts and give sense to them by making the inner contradiction and the ways for managing it visible.

Originality/value – The unfolding and challenging inceptive configuration of the germ cell sheds light on the discursive/conversational/language processes and the activities entangled in socio-material instrumentalities and environments in which people are involved.

Keywords Learning, Organizing, Expansive learning, Germ cell, Knowing

Paper type Research paper

Introduction

This paper engages with the challenges related to reconfigurations of workplaces and organizational contexts (Engeström, 2004), thus dealing with increasingly complex and unpredictable environments. In this organizational landscape, people have to cope with unedited and uncertain problems since. The new scenario is characterized by meaningless situations, huge uncertainty, insecurity, lack of information and turbulent backgrounds.

Organizational subjects have to find their way to work in the face of frequent mobility (vertical and horizontal) within the same organization and between different organizations. They deal with unprecedented tasks and complex problems and with a high-density relational system of activities in which they are involved (integrations, connections, coordination, cooperation, team, transverse processes, etc.) (Hutchins, 2005; Engeström, 2004, 2008; Engeström *et al.*, 1999).



They face challenges, paradoxes and contradictions regarding the difficult balance between effectiveness and efficiency, the need to work in conditions of chaos and ordinary emergency and the plurality of levels and stakeholders (Engeström, 2004; Weick and Sutcliffe, 2007).

The situations of uncertainty and crisis typically cause confusion and sudden loss of traditional knowledge references, thus generating a collapse of the sense of activity.

This entails the creation of knots (Engeström, 2000, 2008), in order to tighten and loosen connections that change rapidly and have to be adjusted and modulated in the concrete situation. The knots are built and dissolved on the spot according to a perspective of unstable centrality in which the *locus* of the initiative to realize keeps changing and takes the form of transactions, interactions and conversations that weave configurations of new possible goals and actions.

This paper contributes to the understanding of innovative ways of thinking, thus producing knowledge and learning in these incoming scenarios. The paper describes how subjects deal with tensions and problems and create new workplaces. The inherent challenge is to dwell upon organizations that require subjects to change and transform traditional activities and explore new emerging objects of work (Engeström, 2004). This is strongly linked with the theme of this special issue : the authorship that people are asked to assume in order to interpret their roles as transformative agents and active authors (Cunliffe, 2001) of the organizational landscape.

We adopt the framework of cultural historical activity theory (CHAT) to highlight the processes by which criticalities, dysfunctions and problems are addressed and managed by subjects in their organizational experience. Specifically, we refer to the concept of “germ cell” (Engeström *et al.*, 2012; Davydov, 1990; Il’enkov, 1977) as a pivotal aspect to promote knowledge sharing, learning and organizational change. By presenting two case studies, this paper points out how the construction of the “germ cell” triggers insights to manage situations of uncertainty.

We attempt to address two main questions:

- RQ1. Why does the “germ cell” have a pivotal role in an organization’s transformation?
- RQ2. Which conditions facilitate the formation of the “germ cell” in the management of complex and uncertain problems?

We answer the research questions first by positioning our contribution inside the literature related to knowing and learning inside organizations, and second by introducing the concept of “germ cell” and connecting it with the metaphors of “waiting experiment” (Sannino and Laitinen, 2015) and “anchoring forward” (Hutchins, 2005; Maitlis and Christianson, 2014). Finally, we analyze the steps by which the “germ cell” is shaped, thus owing to the exploration of problematic situations, underpinning the “germ cell’s” role to open perspectives for multiple applications and development (Engeström *et al.*, 2012).

To this purpose the paper presents two formative interventions (Engeström, 2011, 2015) inside organizations which are characterized by complex and unsettled problems and focuses on the construction of the “germ cell” moving from the problematic situations to the promotion of organizational learning and change. In conclusion, we

discuss and analyze the significant steps and critical issues that characterize the process of joint construction of the “germ cell”.

Toward new ways of knowing, thinking and learning

The ability to face the complex and unpredictable landscape that actually characterizes the organizational world by creating new forms of knowledge and innovative ways of thinking and learning is seen as a distinctive and competitive advantage for companies and organizations (Nahapiet and Ghoshal, 1998; Bontis *et al.*, 2002; Mintzberg, 2009; Weick and Suttcliffe, 2007; Engeström, 2004, 2008).

Knowledge is not only a cognitive entity that people possess in some tacit (Polanyi, 1962) or explicit (Eraut, 2000) form but also a social process of construction, which takes place through constant negotiations and interactions (Lave and Wenger, 1991; Brown and Duguid, 1991). Weick (1995) claims that knowledge is a joint building of meaning, in which sense-making runs as a constant flow of transactions, conversations, negotiations and translations through which people give sense to their daily work experience in side loose coupling organizational contexts.

Such a processual and social nature of knowledge (Suchman, 1987) is embedded in the use of the term “knowing” rather than knowledge (Newell *et al.*, 2009); thus, we can argue that firms are distributed knowledge systems (Tsoukas, 1996), and organizational knowledge is the *texture of workplace learning* (Gherardi, 2006). It relies on the concept of organization, which arises from social perceptions that change with the contexts in which organizational actors constantly construct the concrete organization through their actions and their interpretations of what they and others are doing (Czarniawska, 2008).

These emerging conceptions of knowledge have a strong influence on the method by which we gather knowledge in studying organizational work and managing knowledge work. Gibbons *et al.* (1994) distinguishes between Mode 1, where “knowledge production occurs largely as a result of an academic agenda” and Mode 2, which “requires trans-disciplinarity in which teamworking among academics and practitioners and across different academic disciplines rather than heroic individual endeavour becomes the established norm” (p. 347).

This entails an understanding *from within* (Shotter, 2006, 2008, 2010) the work activities, according to the social nature of organizations and the situated contextual conditions in which the work takes place. As Blackler (1995) claims, knowledge is embedded in technologies and artifacts, entwined in collective and distributed understanding and embodied and engrained in the competencies and skills of key members.

Knowledge embedded in the practice and the contexts, often implicit and taken for granted, requires to pay attention to the *thinking* that practitioners engage with their actions. Yanow and Tsoukas (2009) refer to the condition of human beings, absorbed in the setting within which they are thrown and asked to provide answers quickly in a short time. It is the paradoxical condition in which people find themselves coping with complexity and uncertainty and, at the same time, trying to give meaning to what they do. A *critical thought* is required to enhance the awareness of how subjects react and respond to the world in which they are embedded, thus enhancing their capability of improvising and adapting themselves to challenging and shifting situations. Cunliffe (2002) argues for a relation between

reflexivity and action as crucial in the aim to allow people to act as authors of the organizational realities in which they live (Cunliffe, 2001). A *reflexive dialogical practice* (Cunliffe, 2002) is related to the question of how people enact their work experience and make sense of reality. In this way, they render it accessible to others, thereby contributing to shape their organizational environment, relating with others, and their mode of operating and being in the world.

The possibility of coping with and managing problematic events and uncertain situations depends on the disposition to question and upset daily lives, thus inquiring upon taken-for-granted knowledge. Reflexivity (Cunliffe, 2003) assumes that our experience is complex, interactive and emergent from activities and from the constant processes of meaning construction that we activate as social actors.

Adopting innovative ways of thinking as reflexive practice enhances the possibility to improve changing and learning processes, highlighting the critical dimensions people have to face. The *relationship between learning and changing* has involved a vast array of studies since the past century. It is beyond the scope and lengths of this paper to fully address all the views related to organizational learning and change. We propose some conceptual features that transversely emerge from the analysis of literature (Antonacopoulou, 2004; Gherardi, 2006) and link with the purpose of this paper. The first aspect is the contextual specificity of the factors related to the processes of changing and learning, which characterizes the social interactions among the practitioners involved. Different and plural expectations, interests, goals and constraints convey social, cultural and political factors, which have a strong influence in determining whether and how learning and changing are lived as opportunities. A second dimension is about the relevance of contradictions and dilemmas as triggers for generating a transformative learning process. Facing problematic situations and criticalities and looking for dysfunctions and anomalies is similar to jumping into the unknown, due to the upsetting of traditional and taken-for-granted assumptions and knowledge, which appear no longer valid and actionable. The third aspect refers to the role of practical reflexivity (Cunliffe and Sadler-Smith, 2014) as the critical appraisal of the learning experience. Gherardi (2006) argues that people are always involved in constant processes of knowing, learning and organizing, through which is possible to produce and reproduce the system of activities, achieving new and different ways of to act and talk, thanks to the dialogues and conversations they daily weave.

The features so far briefly described, relating to the literature on organizational transformations and workplace learning, can be summarized in what Victor and Boynton (1998) claim about the reconfiguration of work as a co-configuration. It is an emerging type of work in which the configuration of knowledge unfolds as a constant and a never-ending process among multiple stakeholders (producers, customers, managers, service providers, etc.). In this flexible and demanding way of work and production, the challenge is to promote and achieve a workplace setting in which learning is entangled in the process of work itself, enhancing transformations to manage complex and uncertain problems.

Relating to this challenge, we focus our view inside the CHAT literature, pointing out the specific contribution that the theory of expansive learning yields in facing such new emerging objects and activities.

Engeström (2004), Engeström *et al.* (1999) argues that co-configuration, as a new way of work and organizational context, asks people for a *radical exploration* of new objects and activities that are not yet actionable, thus enhancing an innovative type of learning to cope with the flexible and demanding forms of productions (Engeström, 2007). This learning is *transformative* (introducing new tools, actions and concepts), *horizontal and dialogical* (enhancing boundary crossing, exchanges, social spaces, negotiation and knot-working processes) and *subterranean* (related to implicit knowledge, embedded in collective assumptions of situated appraisal and hidden in not yet visible phenomena) (Engeström, 2004, 2007).

The CHAT emphasizes organizational functioning as a collective and mediated activity, which generates and reproduces actions and operations to pursue an object that is always emergent and evolving, thus seeking to fulfill the collective need as a suitable and actionable answer or outcome. The transformation of the object (as a possible and not-taken-for-granted result of the mediation of interrelated elements [division of labor, community, rules, subject and instrumentalities]) into an outcome (what meets and satisfies a collective need) is the motive of the existence of such an activity system (Engeström, 1987).

Therefore, inside the CHAT framework, the process of learning assumes some key features that are mostly related to the dimensions of community, horizontal movement, hybridization, formation and implementation of a theoretical concept. Following this perspective, we can say that learning is not an individual acquisition (from incompetence to competence), but a collective movement through which subjects, that are involved in the learning process, create a new theoretical concept and try to implement it in practice (Engeström, 2015). The metaphor that the CHAT uses for depicting the learning process is “expanse” (Engeström and Sannino, 2010). The essence of expansive learning is a dialectical movement that the CHAT derives from Davydov (1990) who, inspired by Ilyenkov, introduced the principle of *ascending from the abstract to the concrete* as an interventionist method for changing schools (Sannino, 2011). Expansive learning refers to the ascending from the abstract to the concrete method by putting together the contexts of *criticism* (questioning and debating), *discovery* (the power of modeling and reproducing related to the Davydovian tradition) and *application* (that highlights the importance of the social relevance, the embeddedness of knowledge and the community involvement, as stated by Lave and Wenger, 1991) (Engeström, 1991).

In other words, the process of expansive learning begins with the individuals involved, who question the existing order of their activity, and then a collaborative modeling is carried out; finally, the new model is implemented for creating a new collective activity system (Engeström and Sannino, 2010).

Specifically, we can say that expansive learning is a heuristic conceptual device, based on the logic of *ascending from the abstract to the concrete*, which consists of seven main actions:

- (1) questioning aspects of the consolidated practice;
- (2) analyzing the situation by transforming it to find explanatory mechanisms;
- (3) creating the new model that represents a possible solution to the problematic situation;
- (4) examining the model by understanding its dynamics, potentials and limitations;

-
- (5) implementing the model through practical applications and conceptual extensions;
 - (6) reflecting and evaluating the process of implementation; and
 - (7) consolidating the outcomes reached thanks to the implementation of the model into a new stable activity system.

Inside this process, to promote an effective learning, it is not enough to work on the manifestations and the problematic situations that the players declare. What is crucial is the identification of the original contradiction that brings to the manifested problematic situations.

Compared with the literature outside the CHAT community, the activity theory emphasizes three relevant dimensions.

The first dimension is related to the role of contradictions as inner features of each activity system and aspects through which structural tensions have been historically accumulated (Engeström, 2001). Due to their historical emergence, the contradictions cannot be directly detected but are acknowledged when practitioners articulate and construct them in their daily words and actions (Engeström and Sannino, 2011). Contradictions do not appear as individual manifestations inside subjective experiences, but they are constructed through collective discursive actions through which organizational players try to make sense of and deal with the existent dysfunctions, anomalies and criticalities (Engeström *et al.*, 1999; Taylor and Van Every, 2011).

The second dimension is about the inherent interventionist stance of the CHAT, which is focused on the possibility to enhance transformative and expansive learning inside a concrete and situated activity system. When change is at stake, people have to modify some balances and practices, thus seeking for new connections between phenomena in which they are involved. Such connections are often hidden and not visible, and the challenge is to achieve a new possible vision, to grasp different possibilities and tackle new paths for problems and contradictions. Thanks to criticalities and contradictions, we can proactively attempt to change and transform our workplace situations.

The third dimension relays on the pivotal function of dialectic thought, which in the CHAT refers to abstract “meaning from some initial sensory-concrete diffuse entity” (Sannino, 2011, p. 586). We can connect what Kurt Lewin (1999) says about the possibility to know something only through attempting to change it and what Davydov (1984) claims: “theoretical thinking is based on sensory objective activity, which reconstructs and transform the world around us” (p. 25). Changing practices and transforming activities need to deal with critical events, thus identifying the embedded problem or challenge stemming from daily experience and activity to detect and focus on the emergent early symptoms. This entails thinking dialectically, focusing on the “germ cell” behind the problematic situations (Sannino, 2011).

Relevance of the “germ cell” in expansive learning

Assuming the thoughtful and transformative perspective of the expansive learning theory, we highlight the construction of the early abstract “germ cell” as a central framework for the radical exploration of new knowledge and emerging activities in specific organizational contexts (Engeström, 2004).

Through the method of *ascending from the abstract to the concrete*, the learner gives meaning to concrete manifestations by theoretically abstracting them in a simple unit that is able to express the whole. This theoretical abstraction differs from the empirical one because it refers to the identification of the genetic origin of the phenomena. While the empirical abstraction is a classification of superficial features of phenomena, theoretical abstraction requires the experimentation with problematic situations. This is to construct from the whole an abstract principle that can explain the whole itself, by establishing connections and construct new solutions (Sannino, 2011).

This simple abstraction that contains the functional relationship is called “germ cell”. It is an abstract concept that includes and makes the inner contradiction and possibilities for managing it visible. For example, in Marx’s analyses of capitalism (Il’nikov, 1982), every commodity is identified as the “germ cell” that carries the inner contradiction between *use value* and *exchange value*. The “germ cell” is the smallest part of the whole that explains the problematic situations by showing relationships with aspects that are not visible and offering a perspective for resolving and transforming them (Engeström *et al.*, 2012).

From a methodological point of view, as Engeström *et al.* (2003) stated, the process of ascending from the abstract to the concrete requires:

- (1) an immersion in the context under scrutiny by the researcher to follow the object of the activity;
- (2) involving the subjects in dialogue and connecting the subjectivities with the entire system of activity by identifying a new model; and
- (3) transforming the system by implementing the identified model (through an intervention) (Sannino *et al.*, 2009).

Following these steps, the creation of the germ cell represents a pivotal aspect to achieve the key passage from the identification of the problematic situations to the creation of a new model for promoting change.

Davydov (1982) already pointed out the relevance of the “germ cell” inside the method of *ascending from the abstract to the concrete*. He stated that the construction of the cell was made possible, thanks to the transformation of the early situation and the modeling of the emerging idea. In Davydov’s model, the abstract germ cell is created through the transformation of the sensory concrete and the expansion of the conceptual concrete passed through the control and evaluation of the “germ cell” itself (Davydov, 1982, p. 42).

In relation to Davydov’s model, the CHAT (Engeström *et al.*, 2012) adds the immersion inside the contexts and the critical questioning of existing dominant practices and concepts as a turning point in the construction of the “germ cell”.

In particular, we focus on the first step of “germ cell” construction (Figure 1) by first showing the connection between the “germ cell” and other concepts inside the expansive learning approach. Second, through the description of the case studies, we underline the methodological aspects and the key points that are pivotal in this first step of theoretical abstraction and construction of the potential “germ cell”, without focusing on the subsequent implementation and testing of the “germ cell” itself. Specifically, we claim for a specific relevance of the inceptive process through which the cell stems from the

socio-material environment of discourses, bodily cues, material entanglements and immaterial signals. Such a process can be conceived as an emerging shaped and shared organizer, a new idea that triggers a developing process, thus transforming the initial suggestion into a possible new form of practice.

To explore how the process of shaping the early abstract “germ cell” unfolds, we propose a conceptual link with the waiting experiment metaphor and the connected step of anchoring forward as a way to take over an uncertain and problematic situation.

The waiting experiment is a specific experimental situation provided by Vygotsky to study how human beings get through meaningless situations (Sannino and Laitinen, 2015). Participants are invited into a room and then left without information (neither explanations nor tasks). This condition creates a context of uncertainty and incongruity, challenging the capability to manage and transform the circumstances in which they found themselves. Participants are observed in their attempt to overcome the uncertain and apparently meaningless situation, dealing with different and conflictual stimuli (waiting in an empty room vs finding purposes) and motives (to stay vs to leave) and the possibility to execute actions related to answer the question of “what to do” in that circumstance.

We argue that the waiting experiment can be taken as a relevant and powerful metaphor of the actual organizational scenarios characterized by meaningless and uncertainty, in which people have to deal with contradictions, criticalities and problematic situations. As in the waiting experiment, people engaged in the actual organizational contexts are asked to explore processes of learning from the fields, connecting action and thought and trying to open new visions not yet available for transforming and improving their daily practices.

Therefore, we assume that there is an important and tight connection between the step of the forming “germ cell” and a waiting experiment perspective (Sannino and Laitinen, 2015) to fit action, sense-making, future-oriented vision and conflicting dynamics.

Another relevant and pivotal concept is the anchoring forward disposition. Sannino (2011) refers to the contribution of Hutchins (2005) and Zerubavel (1981) who described

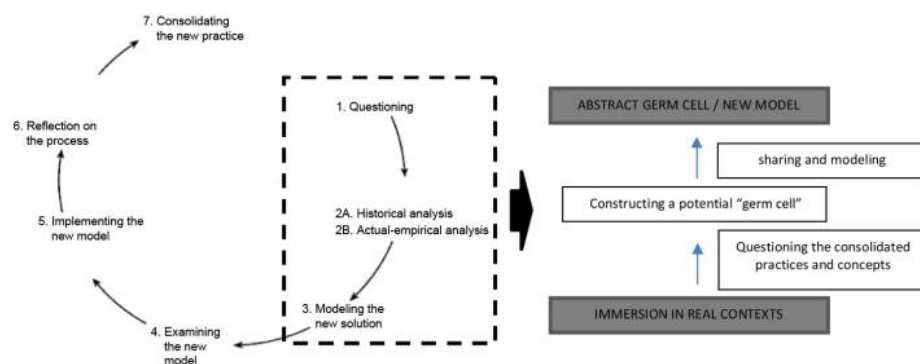


Figure 1.
The process of
expansive learning
(our elaboration from
Engeström *et al.*,
2012)

anchors as provisional representations, not yet stabilized, stemming from social interactions in concrete situations to give sense to what happens and supporting suitable actions. Seeking to face a “what to do” situation, people refer to material (objects, artifacts, space, tools, etc.) and immaterial (perception, discourses, words, ideas, etc.) supports (anchors) to understand how to deal with a problem area and to move forward away from it.

Following the suggestion of [Sannino \(2011\)](#), we refer to the anchoring forward step as another proper metaphor of the ways people use to cope with transformative actions and sense-making connected to the experience of stepping into the unknown and improvising paths for new actions and meanings. We conceive the anchoring forward as a process through which people deal with uncertain situations and unexpected events using provisional representations, material cues and symbolic clues as anchors to support situations. Such anchors enhance transformative actions and provide sense-making stances to cope with the complexity of the context.

The relation between action and sense-making can be conceived as a socio-material process, dealing with contradictions and a temporally oriented approach ([Kaplan and Orlikowski, 2013](#)); considering the multiple interpretations of the past, the present concerns and the future perspectives, people develop a relationship between action and enactment as the creation of an environment that they inhabit ([Maitlis and Christianson, 2014](#)). Acting in uncertain circumstances shapes the conflict of motives, stemming from the contradictions people have to deal with in their daily organizational experience. They are embedded in uncertain circumstances and, at the same time, are asked to make sense of them, seeking new possibilities of action related to their object-oriented activity.

We eventually argue that the connection between the step of the early “germ cell” and the suggestions conveyed by the anchoring forward construct is actionable and promising. The early “germ cell” formation can be treated as a process of anchoring forward through which people try to address the multiple dimensions of uncertainty and lack of knowledge they face, looking progressively for exit routes (search actions, taking over actions and breaking out actions ([Sannino, 2011](#)) to help their positioning in uncertainty, moving into the troubled area and trying to get out.

In the next paragraphs, we describe the two case studies, highlighting the specific organizational contexts and needs and the process of germ cell construction.

Organizational scenarios

In this section, we describe two organizational scenarios related to different sectors that present problematic situations and opportunities for changing.

Case 1: Ethics in a volunteering organization

The first case refers to the biggest blood donors’ association in Italy. In Italy, blood donation is a voluntary action with no consequent remuneration for those who donate. It can be made directly inside hospitals or in specific centers managed by voluntary associations. The work of the association is not only to collect blood but also to promote values and principles related to the donation itself. The association is a not-for-profit organization founded in 1927 and today presents a complex structure, as it is characterized by:

- *Multiple objectives:* Over the years, the association experienced important changes. At the beginning, it was a very small association with the aim of helping in the collection of blood; now, it is a big organization that takes part in national health system decisions. Nowadays, the main goals of the association are that of participating in the direct collection of blood, promoting the culture of blood donation as a universal value of solidarity and civic commitment. At the same time, it aims to guarantee a continuative supply of blood and participate with the national health system in the strategic decisions for a high number of local sites. The association is made up of approximately 22 regional sites, 110 provincial sites and 3,200 municipal sites spread all over the country. The local sites have the task of collecting blood and promoting the value of donation, while the provincial and regional ones have the role of planning, coordinating and monitoring the function of the local sites.
- *Multiple roles:* Members of the association have different roles and types of commitment toward the organization. There are volunteer donors, who are associated to the organization, and their involvement toward the association goes from the donation of blood to a high level of participation in the life and strategies of the association. Among the donors, there are some members (democratically elected for each local, provincial and regional sites) who have managerial roles with the specific task to define the strategies and administrative issues of the organization. Besides donors and managers, there are also members who are employed and have administrative or medical tasks.

The presence of numerous sites in different territories and the variation in the members commitment have created a difficulty for the organization in checking and monitoring the functioning of all the sites. For this reason, the national management has perceived the risk of an organizational fragmentation, a loss of a clear identity of the association, a lack of shared objectives and goals and a widespread pursuit of individual interests of the members, which could be in contrast with the creation of a common good for society.

Case 2: Building networks in a health-care setting

The second case concerns a health district that coordinates and controls activities on the local territory, which is designed to ensure citizens' well-being.

The services that the organization promotes are related to different fields such as food, alcohol and sexual diseases.

The health district's main objective is that of promoting the development of healthy practice and ways of living to prevent the behavior that is detrimental for the health of the population.

In 2014, due to a regional mandate, the district was required to create a working group composed of professionals coming from different fields to shape activities and services that are able to respond in a more effective and efficient way to the needs expressed by the population. The current major challenge for the organization is redefining its organizational structure and rethinking roles, functions and projects.

This reconfiguration is accompanied by the need for professionals to change their approach to work and manage projects that become, in this way, increasingly oriented to collaboration and joint planning with professionals who belong to different areas and

functions. On the one side, the regional mandate allows the organization to operate in line with the trends related to demographic and social changes (increasingly complex and articulated citizens' needs, which are achievable through the implementation of operations that involve specialized skills). On the other side, it requires a deep reconfiguration of its business, in circumstances characterized by the scarcity and reduction of tangible and intangible resources.

The perceived and openly denounced fear by the leadership is the presence of disinvestment by the professionals mostly oriented by individual interests, rather than the creation of common sense and good. In this case, the request of the health district director is that of supporting the professionals in facing this change and assuming their new role and promoting an organizational culture based on organizational communication between the various professionals. They have to work in different fields through a strong organizational integration of different skills and knowledge overcoming the traditional specialized working units. At stake is the support for the creation and maintenance of the working group, thus helping operators in understanding the advantages and limits of working in a multi-sectoral and multi-professional environment.

The two cases are related to organizations that are characterized by different criticalities and challenges. However, they both present organizational contexts invested by substantial and unknown changes. As in the metaphor of the "waiting experiment", the subjects are required to give sense and respond to these meaningless situations (Vygotsky, 1987) because they have to configure new meanings related to unknown situations and construct new systems of activities by transforming their consolidated practices and concepts.

Forming the "germ cell"

Inside this framework, we see the "germ cell" as a turning point through which subjects can give sense to the unknown situation and transform it into one that has a different meaning. In this perspective, the "germ cell" represents a new possible grasp of the meaningless situations. The construction of the cell inside the two organizational contexts represents a process that starts from the exploration of the specific situations and the questioning of the consolidated practices.

Walk the talk

In the case of the blood donors' association, the initial idea of the national board was to create a list of values that could be published and used as a reference for the associates, representing useful guidelines for everyday actions and organizational practices. The critical aspects in this case were related to the different ways of conducting and functioning of the various local sites that concerned different aspects of the organizational life. Most of the problematic situations were related to the associates' lack of involvement and responsibility, which reflect a prevalence of an individualistic view than a collective and shared one. For example, situations in which donors decide to donate primarily because they can obtain free and rapid medical tests, rather than because they take care of the wellness of those people who need blood, are typically frequent inside the association. The main challenge in this case is that of creating conditions through which some ethical dimensions and values that are considered as relevant by all the members of the association can be

shared and applied locally inside various sites on the basis of the situated problematic situations.

We first identified the potential “germ cell” during the meetings with the national board, after analyzing some problematic aspects that characterized the association. We suggested that the concept of “walk the talk” could represent the abstract concept. With walk the talk, we mean identify and put in circulation concrete events (related to ethical dimensions and values) that help members to reflect on the experiences by translating them in relation to the problematic situations that characterize each local site.

Walk the talk contains the inner contradiction of locally applying organizational values. The experiences that the members of the association tell can be reinterpreted and translated for other specific local sites. The contradiction is between the *autonomy* and *adaptation* to common values at the various local sites. On the one side, the autonomy and independence of the branches are fundamental aspects for the development of the association because local managers are more aware of the features of the territory (needs of donors, way of promotion, way of blood collection, communication, etc.). On the other side, the association needs to be recognized not as fragmented but as an organization with a solid identity that works for the welfare of the citizens. This means that the autonomy of the local sites has to be bounded inside a general and shared way of operating.

Tighten knots

In the case of the health district, the identification of the “germ cell” came first after two meetings with the professionals who were identified as members of the working group.

The principal criticalities were related to the challenge, for the professionals, to realize new tasks with the same amount of available resources (time, colleagues, knowledge, competences, etc.).

In this case, creating an interdisciplinary group before helping the professionals in reinterpreting their roles and understanding the importance of the new perspective can represent a risk; the subjects can disinvest and lose the sense of their work. In this regard, some professionals reveal lots of resistances toward the decision of creating a working group without a formal and institutional recognition inside the organization. The main challenge is that of letting people understand the sense and meaning of a new perspective of work that can represent an advantage both for the citizens and for the professionals themselves.

The idea of the germ cell came with the identification of two important aspects: the creation of connections between the professionals that work in different fields and the support of the subject to develop these connection in concrete, integrated actions. In this sense, the organization needs to work at the individual level (support subjects in the reinterpretation of their roles), group level (create connections and develop and support formal and informal relationships among the various professionals) and institutional level (give visibility and acknowledgment to the working group and its actions).

The abstract concept that we identified was “tighten the knots”, which reflects the need of a trans-disciplinary work. Subjects are required to integrate the knowledge related to their own specific field, which is partial and limited, (albeit essential) with other knowledge and perspectives to achieve a proper understanding

of the multifaceted phenomena with which they have to cope. This means that professionals coming from different fields may interact and work closely by producing new knowledge completely different from the previous one produced by any field working alone.

In this case, the inner contradiction is between *specialization* (that the professionals have to acquire and accumulate) and *interdisciplinary* (that they have to construct to answer the complex needs of the citizens).

In both the cases, the contradictions can be managed by putting the two polarities in a dialectical relationship and expanding: in the first case, the autonomy of the sites by sharing and reflecting on concrete experiences and in the second case, the interdisciplinary knowledge of the subjects by supporting the construction of relationships between different professional fields. However, implementing new tools (list of values/formal group) is not enough. Eventually, new organizational views and new commitment and responsibility need to emerge and take shape.

Clues and cues from the field

As previously mentioned, the construction of the “germ cell” has to be grounded in the real contexts and on the discourses and actions of the subjects involved. This means that the abstract concept arises from cues and clues (material and immaterial), which open a possibility for a change that breaks out and transforms the actual critical situation. Such an emergence is not reducible to a cognitive or linear problem-solving procedure; rather, it is an unfolding process mediated and shaped by acts, conversations, discourses, decisions, tools, gears and instruments. The abstraction is positioned in socio-material contexts and doubts, conflicts, resistances, involutions and evolutions. We detected stories and discussions about consolidated practices, concepts, ongoing use of tools and artifacts and emerging criticalities; this knowledge represents the empirical basis upon which we generated the theoretical abstraction in collaboration with the subjects involved.

Conflict of motives and associated meanings

In the case of the blood donors’ association, we conducted 40 interviews with different members inside the organization and located at different places of the Italian territory. The aim was that of collecting a large number of stories and concrete experiences that would have allowed the identification of values and ethical dimensions. In the case of the health district, we discussed with the members of the working group about the consolidated practices and criticalities related to the networking inside their organization. Through the immersion in the contexts and the activation of dialogues with the subjects, we have been able to identify different meanings related to the germ cell and its potential application. The dialogues showed risks, limits, potentials, advantages and disadvantages of the two polarities that seem to be relevant for the subjects.

In the conversations of the first case (Table I), we identified shifts between the two poles; while the importance of identifying guidelines based on common values is perceived as a fundamental aspect for the association’s life, the subjects also underline some limitations in the application of the latter (such as the lack of shared values and practices). Besides, there is the perception that the autonomy of the local sites is a strength because they work at the frontline of the organization. At the same

Excerpts from dialogues		
Manager – 10	“... if each local site works alone without following common guidelines, the association risks to build a real bad reputation...”	Need to create a common identity of the association
Employee – 5	“... we are trapped by our own associative statute because if you give administrative autonomy and management to various local venues is absolutely easy that there is a flow of information. Who does not want to pass the information or data to regional branches or national ones, does not!...”	Constraints of the association guidance
Manager – 35	“... since I was a president I do not miss any municipal or provincial meeting. This is because I want to see how the different locations work and also to recognize the huge effort they put in their work. This is also the only way to stay close to donors and not forget that they represent our great strength and above all the engine of all the association...”	Advantages of the local sites’ autonomy/independent work as well as the coordination of the national, regional and provincial sites
Manager – 16	“... look, I cannot tell you what the ethical guidelines of the association are, I only know the pronouncements that the founder formulated 40 years ago...”	Absence of clear definition of the association’s guidelines
Donor – 21	“... there are so many political interests, there are lots of members that use their experience of donation either to become a manager or even for a political career. This individual interests bring to an association that is fragmented without a clear direction and clear ethical guidelines...”	Risk of a prevalence of individualistic view and interests

Table I.
Case 1

time, the risk is that of increasing the individualistic view that brings members to act based on their personal interests, rather than on the common good of the organization and users.

The movements between the two poles have consequences on different aspects that characterize life inside the association. These aspects are related, for example, to the way in which subjects interpret their role (“I don’t go to national assemblies: we have to deal with concrete problems that we encounter every day in our country, and in the assemblies we just chat, we talk about abstract things, it’s just politics, believe me, just politics!”); the type of relationship/communication between the various members (“well you know every center is different ... this site is like a big collection center: the donation seems an assembly line, we have no relationship with the managers”); and the

interpretation of donation (“there are things that have to be clear and valid for everybody: donating should be based on spontaneity and voluntary and not on opportunism”).

In the second case (Table II) the conversations underline the presence of different positions related to the focus on integration and specialization. On the one side, the interdisciplinary approach seems to bring positive consequences on the work of professionals and on the image of the organization. But, at the same time, the perceived risk is that of dispersion because the subjects have to invest time and resources in acquiring knowledge about the topic of other professionals and fields inside the organization. In this case, the movement between the two poles affects the interpretation of the professional roles and the meaning of the regional mandate that goes from a strong disinvestment (“I would say: but which is the advantage for us? This mandate requires us to invest in our work in terms of specialization in relation to our field and then, at the same time, giving us the same economic recognition, ask us also embarking on this interdisciplinary working group”) to the recognition of the relevance of the interdisciplinary approach (“*this* is a great opportunity: now we don’t have a clear vision

Excerpts from dialogues

Professional – 3	“... I assure that we do not know what the other areas do. Although now it’s clear that we do similar projects and synergistic...”	Need to know and communicate with other fields inside the organization
Professional – 7	“... today we are all here around the table but did not even know there was an office of communication/marketing...”	
Professional – 5	“... of course, if we start working together, creating this working group and communicating outside, we can also convey a certain image of our company as particularly attentive to users...”	Positive consequence of the interdisciplinary approach
Professional – 6	“... honestly, I do not think it’s so important to have an integrated view of operations: today is important to know a lot about the object of our job. If I try to know things about other field it can be confusing...”	Risk of confusion
Professional – 1	“... but nothing will ever change, let’s face it, what are we here to do? None of us has an interest in doing a job like this, and then what would be the recognition?...”	Absence of a formal acknowledgment

Table II.
Case 2

of our organization and its functioning. This mandate can bring us to work together with stronger competences”).

Conclusion

Why does the “germ cell” have a pivotal role in an organization’s transformation? Which conditions facilitate the formation of the germ cell in the management of complex and uncertain problems?

The paper describes the formation of the “germ cell” as a process that opens possibilities for subjects to recognize and reflect on the recurrent and taken-for-granted practices and concepts and give sense to them by making the inner contradiction and the ways for managing it visible. In the two cases, the concepts of “walk the talk” and “tighten the knots” have the potential to create a relationship between two poles of the contradiction in order to create a shared meaning.

This process of formation is not separated by everyday actions and contexts because it is an abstract concept that allows to integrate routines and interpretations that are taken for granted. In this sense, the abstraction of the “germ cell” has a strong concrete role because, on the one side, it is constructed through the investigation and reproduction of experiences and representation of subjects, and, on the other hand, it requires the use of socio-material aspects to be translated into action. Finally, the “germ cell” permits us to connect the individual positions inside a collective view because it is based on a joint reflection and analysis of the situations. This collective view can be reached through the dialogue and discourses.

Such an exit is not taken for granted and relies on addressing two specific points of attention. The first one is related to the ability to create real critical encounters with people, shaping conditions through which they become active authors of events and enhance their volition and practice to break and transform the *status quo* of the situations. The second one refers to the role of the researcher and the need to position themselves in a sort of boundary zone. Shaping critical encounter conditions entails the possibility to enable people to act in socio-material situations, thus establishing a climate of trust and just enough agreement for coping with problems that are felt as threatening and/or challenging. The willingness to handle meaningless situations, boundary problems and events in which sense collapses requires particular attention in promoting relational and institutional agreement. Indeed, the critical encounter asks for political legitimating and managerial support (to guarantee the process of knowledge shaping and sharing) and a disposition to focus and identify inner contradictions (to provide sustainable and realistic knowledge for learning and development). This means dealing with situated, dynamic and socially constructed knowledge that emerges through an ongoing relational accomplishment (Ripamonti *et al.*, 2016). A proper setting of critical encounter provides a good opportunity for understanding, with practitioners, what is considered and acknowledged as a relevant problem (uncertainty, critical issue, question to be solved and springboard for new actions) in the lived experience of organizational life. A critical encounter situation relies also on the condition of waiting experiment, where people inhabit contexts characterized by high uncertainty and crisis, in which the “usual” modes of thought and action show in practice their clear mismatch. In this regard, Lanzara (1993) claims for a negative capability, which means being able to accept the moments of uncertainty and lack of

direction and, instead, seize the potential of understanding and action that these situations bring with them. This is not necessarily to invent entirely new activities, but rather to revisit and relocate the “routine” normally used within different and never experienced contexts. We can use the image of a path that we follow to cross the woods; it represents the routine we are used to, thus repeated paths that have been successful and that allow us to effectively reach the objective, thereby economizing time to get out of the woods. Shaping a critical encounter underpins the activation of anchoring forward that improves the subjects’ “negative capability” to reorganize the material offered by organizational environment.

To promote people commitment and engagement in producing situated knowledge upon the existing activities and practices, a key role is played by the researcher who is asked to improve, sustain and nurture the process. This entails the need to position himself within the organizational contexts, paying attention to the different epistemic and professional cultures and inhabiting a sort of boundary zone. The meaning of this utterance is well described by Cunliffe (2001, 2009), Cunliffe and Karunanayake (2013), who argues for a relationship between the researcher and those involved from the perspective defined within a hyphen-space in reference to the hyphen that unites and separates simultaneously (and symbolically) players involved in a field research. It is a relationship that mutually influences actors in building their role and involved activities; thus, conducting research and accessing one another can be represented as an attempt of which no one is in full control and which requires constant reflective attention compared with mutually exercised influences. The hyphen character symbolizes the fluid and plurality of our research contexts and relationships, considering the blurry nature of mutual and multiple meanings; its boundaries are established among the various actors of search. The hypothesis suggested by the author is that such a placement does not depend on a predetermined decision, but unfolds from the set of plots, conversations and negotiations related to emerging expectations, interpretations and needs. Practitioners and researchers work in a common process of knowledge production, seeking for an active detection of situated problems and contradictions and anchoring the critical situation to possible and sustainable actions that have to be founded and taken over.

In conclusion, we underline how the focus on the unfolding and challenging inceptive configuration of the germ cell sheds light on the discursive/conversational/language processes and the activities entangled in socio-material instrumentalities and environments, through which people try to inhabit a progressively more complex and defying organizational world.

References

- Antonacopoulou, E. (2004), “The dynamics of reflexive practice: the relationship between learning and changing”, in Reynolds, M. and Vince, R. (Eds), *Organizing Reflection*, Ashgate, Aldershot, pp. 47-64.
- Blackler, F. (1995), “Knowledge, knowledge work and organizations: an overview and interpretation”, *Organization Studies*, Vol. 16 No. 6, pp. 1021-1046.
- Bontis, N., Crossan, M.M. and Hulland, J. (2002), “Managing an organizational learning system by aligning stocks and flows”, *Journal of Management Studies*, Vol. 39 No. 4, pp. 437-469.

- Brown, J.S. and Duguid, P. (1991), "Organizational learning and communities of practice: towards a unified view of working, learning, and innovation", *Organization Science*, Vol. 2 No. 1, pp. 40-57.
- Cunliffe, A. and Karunanayake, G. (2013), "Working within hyphen-spaces in ethnographic research: implications for research identities and practice", *Organizational Research Methods*, Vol. 16 No. 3, pp. 364-392.
- Cunliffe, A.L. (2001), "Managers as practical authors: reconstructing our understanding of management practice", *Journal of Management Studies*, Vol. 38 No. 3, pp. 351-371.
- Cunliffe, A.L. (2002), "Reflexive dialogical practice in management learning", *Management Learning*, Vol. 33 No. 1, pp. 35-61.
- Cunliffe, A.L. (2003), "Reflexive inquiry in organizational research: questions and possibilities", *Human Relations*, Vol. 56 No. 8, pp. 983-1003.
- Cunliffe, A.L. (2009), *A Very Short, Fairly, Interesting and Reasonably Cheap Book About Management*, Sage, London.
- Cunliffe, A.L. and Sadler-Smith, E. (2014), "Cottage industries, critique and scholarship", *Management Learning*, Vol. 46 No. 1, pp. 3-5.
- Czarniawska, B. (2008), *A Theory of Organizing*, Edward Elgar Publishing, Cheltenham.
- Davydov, V.V. (1982), "The psychological structure and contents of the learning activity in school children", in Glaser, R. and Lompscher, J. (Eds), *Cognitive and Motivational Aspects of Instruction*, Deutscher Verlag der Wissenschaften, Berlin, pp. 37-44.
- Davydov, V.V. (1990), *Types of Generalization in Instruction: Logical and Psychological Problems in the Structuring of School Curricula*, National Council of Teachers of Mathematics, Reston, VA.
- Engeström, Y. (1987), *Learning By Expanding: An Activity Theoretical Approach to Developmental Research*, Orienta-Konsultit, Helsinki, Finland.
- Engeström, Y. (2000), "Activity theory for analyzing and redesigning work", *Ergonomics*, Vol. 43 No. 7.
- Engeström, Y. (2001), "Expansive learning at work: toward and activity theoretical reconceptualization", *Journal of Education and Work*, Vol. 14 No. 1, pp. 133-156.
- Engeström, Y. (2004), "New forms of expansive learning at work: the landscape in co-configuration", *Journal of Workplace Learning*, Vol. 16 Nos 1/2, pp. 11-21.
- Engeström, Y. (2007), "Enriching the theory of expansive learning: lessons from journeys toward co-configuration", *Mind, Culture and Activity*, Vol. 14 Nos 1/2, pp. 23-39.
- Engeström, Y. (2008), *From Teams to Knots: Activity- Theoretical Studies of Collaboration and Learning at Work*, Cambridge University Press, Cambridge, MA.
- Engeström, Y. (2011), "From design experiments to formative interventions", *Theory and Psychology*, Vol. 21 No. 5, pp. 598-628.
- Engeström, Y. (2015), *Learning by Expanding: An Activity-theoretical Approach to Developmental Research*, 2nd ed., Cambridge University Press, Cambridge, MA.
- Engeström, Y., Engeström, R. and Vähäaho, T. (1999), "When the center does not hold: the importance of knotworking", in Chaiklin, S., Hedegaard, M. and Jensen, U.J. (Eds), *Activity Theory and Social Practice*, Aarhus University Press, Aarhus.

- Engeström, Y., Nummijoki, J. and Sannino, A. (2012), "Embodied germ cell at work: building an expansive concept of physical mobility in home care", *Mind Culture and Activity*, Vol. 19 No. 3, pp. 1-23.
- Engeström, Y., Puonti, A. and Seppänen, L. (2003), "Spatial and temporal expansion of the object as a challenge for reorganizing work", in Nicolini, D., Gherardi, S. and Yanow, D. (Eds), *Knowing in Organizations: A Practice-based Approach*, Sharpe, Armonk, NY, pp. 151-186.
- Engeström, Y. and Sannino, A. (2010), "Studies of expansive learning: foundations, findings and future challenges", *Educational Research Review*, Vol. 5 No. 1, pp. 1-24.
- Engeström, Y. and Sannino, A. (2011), "Discursive manifestations of contradictions in organizational change efforts: a methodological framework", *Journal of Organizational Change Management*, Vol. 24 No. 3, pp. 368-387.
- Gherardi, S. (2006), *Organizational Knowledge: The Texture of Workplace Learning*, Blackwell, Oxford.
- Gibbons, M., Limoges, C., Nowotny, H., Schwartzman, S., Scott, P. and Trow, M. (1994), *The New Production of Knowledge: The Dynamics of Science and Research in Contemporary Societies*, Sage, London.
- Hutchins, E. (2005), "Material anchors for conceptual blends", *Journal of Pragmatics*, Vol. 37 No. 10, pp. 1555-1577.
- Il'enkov, E.V. (1977), *Dialectical Logic: Essays in its History and Theory*, Progress, Moscow.
- Il'enkov, E.V. (1982), *The Dialectics of the Abstract and the Concrete in Marx's Capital*, Progress, Moscow.
- Kaplan, S. and Orlikowski, W. (2013), "Temporal work in strategy making", *Organization Science*, Vol. 24 No. 4, pp. 965-995.
- Lanzara, G.F., (1993), *Capacità Negativa: Competenza Progettuale e Modelli di Intervento Nelle Organizzazioni*, Il Mulino, Bologna.
- Lave, J. and Wenger, E. (1991), *Situated Learning: Legitimate Peripheral Participation*, Cambridge University Press, Cambridge, MA.
- Maitlis, S. and Christianson, M. (2014), "Sensemaking in organizations: taking stock and moving forward", *The Academy of Management Annals*, Vol. 8 No. 1, pp. 57-125.
- Mintzberg, H. (2009), *Managing*, Berrett-Koehler Publishers, San Francisco.
- Nahapiet, J. and Ghoshal, S. (1998), "Social capital, intellectual capital, and the organizational advantage", *The Academy of Management Review*, Vol. 23 No. 2, pp. 242-266.
- Newell, S., Robertson, M., Scarbrough, H. and Swan, J. (2009), *Managing Knowledge Work and Innovation*, Palgrave Macmillan, London.
- Polanyi, M. (1962), *Towards a Post-Critical Philosophy*, Harper Torckbooks, New York.
- Ripamonti, S., Galuppo, L., Gorli, M., Scaratti, G. and Cunliffe, A. (2016), "Pushing action research towards reflexive practice", *Journal of Management Inquiry*, Vol. 25 No. 1, pp. 55-68.
- Sannino, A. (2011), "Activity theory as an activist and interventionist theory", *Theory & Psychology*, Vol. 21 No. 5, pp. 571-597.
- Sannino, A., Daniels, H. and Gutierrez, K. (2009), *Learning and Expanding with Activity Theory*, Cambridge University Press, Cambridge, MA.

- Sannino, A. and Laitinen, A. (2015), "Double stimulation in the waiting experiment: testing a Vygotskian model of the emergence of volitional action", *Learning, Culture and Social Interaction*, Vol. 4 No. 1, pp. 4-18.
- Shotter, J. (2006), "On the edge of social constructionism: Wittgensteinian inquiries into organizations and management", *Qualitative Research in Organizations and Management*, Vol. 1 No. 3, pp. 189-203.
- Shotter, J. (2008), "Dialogism and polyphony in organizing theorizing in organization studies: action guiding anticipations and the continuous creation of novelty", *Organization Studies*, Vol. 29 No. 4, pp. 1-24.
- Shotter, J. (2010), *Social Construction on the Edge: 'Witness'-Thinking and Embodiment*, Taos Institute Publication, Taos, NM.
- Suchman, L.A. (1987), *Plans and Situated Actions: The Problem of Human-Machine Communication*, Cambridge University Press, Cambridge, MA.
- Taylor, J.R. and Van Every, E. (2011), *The Situated Organization: Case Studies in the Pragmatics of Communication Research*, Routledge, New York.
- Tsoukas, H. (1996), "The firm as a distributed knowledge system: a constructionist approach", *Strategic Management Journal*, Vol. 17 No. S1, pp. 11-25.
- Victor, B. and Boynton, A.C. (1998), *Invented Here: Maximizing Your Organization's Internal Growth and Profitability*, Harvard Business School Press, Boston, MA.
- Weick, K.E. (1995), *Sensemaking in Organizations*, Sage Publications, Thousand Oaks, CA.
- Weick, K.E. and Suttcliffe, K.M. (2007), *Managing the Unexpected*, John Wiley & Sons, San Francisco.
- Yanow, D. and Tsoukas, H. (2009), "What is reflection-in-action? A phenomenological account", *Journal of Management Studies*, Vol. 46 No. 8, pp. 1339-1364.

Further reading

- Corbin, J. and Strauss, A. (1993), "The articulation of work through interaction", *Sociological Quarterly*, Vol. 34 No. 1, pp. 71-83.
- Costley, C., Elliott, G. and Gibbs, P. (2010), *Doing Work Based Research*, Sage, London.
- Dutton, J.E. and Quinn, R.E. (Eds) (2003), *Foundations of a New Discipline*, Berrett Koehler, San Francisco, CA, pp. 66-80.
- Engeström, Y. (2005), "Knotworking to create collaborative book intentionality capital in fluid organizational fields", in Chapter Beyerlein, M.M., Beyerlein, S.T. and Kennedy, F.A. (Eds), *Collaborative Capital: Creating Intangible Value*, Elsevier, Amsterdam, pp. 397-336.
- Engeström, Y., Kajamaa, A., Kerosuo, H. and Laurilla, P. (2010), "Process enhancement vs community building: transcending the dichotomy through expansive learning", in Yamazumi, K. (Ed.), *Activity Theory and Fostering Learning: Developmental Interventions in Education and Work*, Center for Human Activity Theory, Kansai University, Osaka, pp. 1-28.
- Engeström, Y., Miettinen, R. and Punamaki, R.L. (Eds) (1999), *Perspectives on Activity Theory*, Cambridge University Press, Cambridge, MA.
- Weick, K.E. (2003), *Positive Organizing and Organizational Tragedy*, in Cameron, K.S., Dutton, J.E. and Quinn, R.E. (Eds), *Positive Organizational Scholarship: Foundations of a New Discipline*, Berrett-Koehler, San Francisco, CA, pp. 66-88.

About the authors

Silvia Ivaldi is a PhD Candidate at the Faculty of Sociology at Università Cattolica, Milano (Italy). Among her academic activities, she is the Owner of the course group management and Teaching Assistant of the course work and organizational psychology. She takes part in various research and consultancy projects on the field: the main issues are related to the management and development of organizational contexts. Her research interests include organizational culture, organizational innovation and new ways of working. Silvia Ivaldi is the corresponding author and can be contacted at: silvia.ivaldi@unicatt.it

Giuseppe Scaratti is a Full Professor of Work and Organizational Psychology at Università Cattolica, Milano (Italy). As an applied psychologist, his experience is rooted in counseling activities in different kinds of organizations, private and public, for profit and loss. His main research interests focus on training, consultancy and organizational change; qualitative methodology for organizational inquiry; and organizational cultures and communities of practices.

For instructions on how to order reprints of this article, please visit our website:

www.emeraldgroupublishing.com/licensing/reprints.htm

Or contact us for further details: permissions@emeraldinsight.com