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9 A dynamic view of organizing

An integrative approach

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1 Introduction

Although nested within, and across, diverse debates and theoretical traditions, recent decades have seen an increased focus on the processual dimension of management and organization (Langley & Tsoukas 2016).¹ From a distal/proximal categorization of the management and organization debate (Cooper & Law's 1995), the neologism "process organizational research" gained considerable traction (Langley & Tsoukas 2016), to become a defining feature of the field. It is widely recognized that since Karl Weick's auspicious book (1979), the term *organizing* has substituted the term organization in large areas of organizational scholarship, inviting scholars to think how settings of interaction become organized. In addition to this, it is now axiomatic to consider paradigms and how they work, within the study of management and organization (*see, e.g.* Clegg et al. 1996; Cunliffe 2008; Burrell & Morgan 2017; Hatch 2018). Organizational scholars acknowledge how attention has recently shifted away from organizations as entities in themselves, towards the actual processes that give rise to organizations in ways that reflect the product of human action (Bacharach et al. 1995; Helin et al. 2014; Hernes 2014; Langley & Tsoukas 2016). As Langley and Tsoukas (2016) put it,

the growing use of the gerund (-ing) indicates a desire to move towards more dynamic ways of understanding organizational phenomena, incorporating fluidity, emergence, flow, and temporal and spatial interconnections.

(Langley & Tsoukas 2016, p. 2)

Despite some differences in research traditions and theoretical backgrounds, there is a marked interest in understanding how organizations emerge from human action, knowledge, learning and cognition.

For example, Secchi and Cowley (2021) recently propose a model for studying 'organizational cognition' focussing on what they call the 'meso-domain'. As the authors maintain

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[r]ather than strive to ‘fill’ a micro–macro gap, we trace complex projects to how professional and social persons cooperate while using devices and routines. Their activity constitutes a meso domain whose concerns are central to management and thus aptly labelled as involving *social organizing*.

(Secchi & Cowley 2021, p. 80)

As the meso-domain is characterized by individual, dyadic and social actions relevant to the organizations, the authors describe it as the glue that connects the various elements together. As the authors continue “By highlighting the meso-domain, we open the ‘black box’ of thinking, practices and happenings between individuals by focusing on how actions are enhanced or constrained by micro and macro-structural elements” (*Ibidem*). Secchi and Cowley propose a radical systemic view of cognition that, as they highlighted, “allows to focus on adaptation and changes at the core of the organizational life” (Secchi & Cowley 2021, p. 89).

The concept of cognition the authors mobilizes in their model refers to the tradition of distributed cognition (Hutchins 1995), which – differently from other cognitive traditions – identify cognitive processes as the connection the doings of individuals with each other, also involving bodies and equipment, within highly structured cultural environments. Thus, the organizational cognition perspective proposed by the authors’ supplements with ecological, enacted, extended and embodied additions the classic mind-centred view of cognition (Secchi & Cowley 2021, p. 85).

Consistent with Secchi and Cowley’s proposal, we advise focussing on both situated actions (Secchi and Cowley’s real-time actions) and recurrence of actions (Secchi and Cowley’s continuous actions in the meso scale of social organizing). Furthermore, to contribute to the label “organizational cognition” promoted by this collection, we suggest enriching the analysis allowed by distributed cognition with the analytical apparatuses coming from another tradition, namely practice-based studies of knowing and learning (Gherardi & Nicolini 2002; Gherardi 2009, 2019; Gherardi & Strati 2012),² that focusses on what Secchi and Cowley ascribe to meso-domain. We are claiming, thus, that to understand better the emergence of organizing through a focus on everyday organizational life, “organizational cognition” should also include an attention to the dynamic of learning and knowing within communities of practices.

With the analysis of a case of work practice in theatre, we will show how the analytical tools coming from the two traditions point out different elements to explain the relationship between real-time situated actions and the continuous actions that characterize social practices. Doing so, we will provide evidence of the role of distributed cognition, social learning and collective knowing as steppingstones for mundane creative innovation³ within organizations.

The idea of using theoretical tools of these two traditions combined should not be seen as a forced act. As we will show, distributed cognition and practice-based studies of learning and knowing have their roots in cognitive ethnography (Lave 1988), and they share a similar focus on the relationship between actions, cognition, learning and knowing within ecological settings.

The rest of the chapter is organized as follows. The following section considers cognitive ethnography as commune root allowing the recent synergy across disciplines over conceptualizations of knowledge, learning and cognition. After establishing a commune ground, the chapter continues further, presenting both distributed cognition and a particular strand of practice studies. Section 3 examines the rising third wave of cognitive studies (Clark & Chalmers 1998; Cash 2013) and briefly presents the approaches to distributed cognition (Hutchins 1995) and contextualizes them in cognition studies. The fourth section focusses on the central concepts of the practice approach on learning and knowing in the community of practice (Lave 1988; Lave & Wenger 1991; Gherardi et al. 1998), as it has been developed by management and organizational literature (Brown & Duguid 1991; Gherardi 2000, 2019; Nicolini et al. 2003; Nicolini & Monteiro 2016). Section 5 presents our case study with a brief outline of the research methods employed, while the six is dedicated to a detailed analysis of the empirical case, applying tools from distributed cognition (Hutchins 1995; Clark & Chalmers 1998; Vallée-Tourangeau & Cowley 2013) and analysis of practices involved (Nicolini 2012; Gherardi 2019). In conclusion, we highlight how the proposed integrative approach provides conceptual tools for understanding everyday creativity, collective knowing and cognition as mundane activities in organizations.

2 A synergy in cognitive analysis?

The past three decades have provided important findings about the collective dimension of cognition (Cowley & Vallée-Tourangeau 2017). In the final pages of *Cognition in the Wild*, Edwin Hutchins (1995) encourages the study of cognition outside the laboratory and urged the practice of ‘cognitive ethnography’. According to Hutchins, an activity progresses through functional systems in ways that bring representational media into coordination with one another. For him, such representational media are not always inside individuals; they can be outside as well. In describing tasks involved in navigation practice, Hutchins recognizes several cognitive systems, some of which incorporate others, and some consist of individual internal processes or processes in coordination with a set of tools. Moreover, they entail group processes which interact with one another and with a set of tools. According to Hutchins, each system has

identifiable cognitive properties that can only be known by analysing the internal processes that transform states inside the system through representational media. Finally, Hutchins underlines that coordination work is not spontaneous in navigation work. In this respect, the operations of the navigation team constitute for the participants a structured experience where knowledge is produced. Here, participation in the performance of the task allows the quartermasters to “acquire an internal organization that permits them to coordinate with the structure of their surroundings” (Hutchins 1995, p. 374). Learning then, is perceived as the propagation of organization through an adaptive system. As Hutchins explained, most learning in the navigation setting occurs by doing, and “the changes to internal media that permit them to be coordinated with external media happen in the same processes that bring the media into coordination with one another” (Hutchins 1995, pp. 373–374). In discussing distributed cognition and navigation work, Hutchins highlights the importance of the *corpus* of practice because partial solutions to problems remain fixed and residing within it. Indeed, for Hutchins the material and conceptual tools of the job, and its ongoing organization, are what constitutes the practice, thus ensuring that “cognition is a fundamentally cultural process” (Hutchins 1995, p. 374).

Prior to Hutchins’ use of the term ‘cognitive ethnography’, the designation was used by the social anthropologist Jean Lave (1988). In her influential study on everyday cognition and the use of arithmetic outside of school, Lave demonstrates how success at problem-solving varies for the same people in different contexts. Focussing on mundane daily activities, she shows how the expression of cognitive activities depends upon context, which demands that cognition must be studied ethnographically, *in situ*. Lave’s work challenged the assumption of cognitive stability and continuity across settings through learning, by studying cognition outside laboratories focussing on situated activities and, more specifically, how situated activities are structured to be ‘the same’ regardless of the context. In her view, the continuity of situated specific activity across events and contexts is a matter of social reproduction. Therefore, instead of constituting the basis of an individual cognitive universalism, cognitive continuity is seen as active reproduction of settings, activities and selves. According to Lave, cognitive continuity in situated activity is a distributive phenomenon: “Neither persons nor arenas, and certainly not cognitive strategies nor contexts for thinking, are by themselves the locus of continuity in experience over time and across situations” (Lave 1988, p. 188). However, this continuity production is fluctuant, ongoing and not crystalized. Thus, Lave explains how the construction process of a routine activity cannot be separated from the manufacture of change. Indeed, practices entail both reproduction and change, partly individually and partly through the reproduction of the constitutive order (Nicolini 2012). Therefore, the ability to

conduct an activity and to produce novelty – relevant for organizations – is entangled with everyday practices (Brown & Duguid 1991):

If everyday practices are powerful, it is because they are ubiquitous. If ubiquitous, they are synomorphically organized and sites of the direct, persistent and deep experience of whole-persons acting. These seem to be crucial conditions for efficacious human activity.

(Lave 1988, p. 190)

In management and organization studies, Hutchins and Lave are rarely considered simultaneously because they work in different disciplines and contribute to different streams of scholarship (cognitive studies for the former and learning studies for the latter). However, their consideration of the relationship between cognition and practices shows a degree of analytical convergence. Both consider ongoing situated activities in complex ecological settings and point to the importance between context and the focus on learning and knowing that emerge from doing. In addition, they both highlight how cognition is not something that happens solely in the mind of individuals, but rather it is a distributed sociocultural phenomenon that also involves material resources and the environment.

Hutchins (1995), for example, recognizes the importance of Lave and the scholars attentive to ethnographies of work and science studies in redefine what is considered cognition. As Hutchins refers to Goodwin (1993), Goodwin and Goodwin (1995), Latour (1986), Lave (1988), Lave et al. (1984), Suchman (1987) and Theureau (1990) as good examples of “truly ethnographic studies of cognition” (Hutchins 1995, p. 371), we can claim that this establishes the basis for a debate across disciplines. Moreover, it also indicates that the boundaries between sociocultural and cognitive concepts of knowledge are less clear-cut than they first appear. Although not always explicitly, traditions coming from Lave and Hutchins’s are often intertwined, and we claim they should be integrated to highlight different aspects of the same phenomenon of interest crucial for the proposed label “organizational cognition”.

3 From extended cognition to distributed cognition

Traditionally, the extended vision of cognition started with the so-called ‘first-wave extended cognition’ movement (Sutton 2010) and in particular the much-cited article “The Extended Mind” (Clark & Chalmers 1998). In the latter, Clark & Chalmers explain how the environment plays an active role in driving cognitive processes. They propose the concept of “active externalism” as a way to account for the entanglement(s) between the mind and the environment. In their vision, external objects support cognitive processes, where the mind and the environment work together

as a “coupled system”; all components of which actively play a role in collectively conducting behaviour and cognition. Behavioural competence can change if one of the components of the system is removed. Thus, behaviour is shaped, influenced and constantly remodelled by the system. At the basis of the “coupled system” theory, there is a parity principle: the external tools that play cognitive roles of supporting action can be considered part of cognition (Sutton 2010).

Clark and Chalmers’ proposal is strongly connected with a broader body of research in cognitive science, where cognition is often considered contiguous with processes in the environment. In particular, they cite similar studies like Suchman’s theory of situated action (Suchman 1987), the studies of real-world-robotics (Beer 1989) and research on the cognitive properties in the collective social environment (Hutchins 1995). According to Clark and Chalmers, considering cognition as something extended is a terminological decision and a choice in the investigation of cognition.

In effect, explanatory methods that might once have been thought appropriate only for the analysis of ‘inner’ processes are now being adapted for the study of the outer, and there is promise that our understanding of cognition will become richer for it.

(Clark & Chalmers 1998, p. 10)

While the first wave has been described as extended mind-based (EM-based) using a parity principle, second wave EM is grounded in a complementary principle (Sutton 2010). The complementary principle claims that an extended cognitive system includes many components with different roles and features that contribute collectively and complementarily to cognition (Sutton 2010). These components must differ from internal ones for being integrated into the cognitive system. The complementary principle is at the basis of what Menary (2010) called “cognitive integrationism”. This concept explains how external cognitive resources do not replicate the mind’s processes, instead they augment and complement cognitive abilities. According to Menary (2007), cognitive systems work by integrating neural functions through bodily and linguistic functions, as well as those of other representational vehicles. Menary follows the embodied approaches to the mind and cognition, explaining how the body and the relations with the environment shape the mind. However, he does not neglect the contribution of external representational systems to our cognitive capacities. Cognitive integration consists of bodily engagement with vehicles in the extra-bodily environment by integrating them into a whole. Second wave integrationist approaches, then, emphasized limits to the boundaries of cognitive systems, embracing only those complementary external resources to create a coalition with neurological processes.

According to Cash (2013), both the first and second waves base their arguments on an epistemological individualization of the cognitive process. Distinguishing a different strand in the literature, Cash identifies the third wave of ideas⁴ he called “socially and culturally distributed cognition”. According to this, individual cognition occurs within and is sustained and mutually co-constructed by, more extensive social, institutional, normative, political and technological systems and cultural practices. In this view, the extended and individual mind concept is overlooked in favour of socially and culturally distributed cognition (Rogers 1992; Halverson 1995; Hutchins 2008; Protevi 2009; Cash 2010).⁵ The mutual influence between practices and individuals is rather underlined through interaction, where collective cognitive products shape individuals’ cognitive capacity and system. In explaining this connection and mutual shaping of cognitive capacity, Cash, for instance, uses the example of language, illustrating how contemporary spoken and written English has been an emergent (and ongoing) collective result of individual decisions and interactions between English speakers.

Hutchins (1995) ethnographic study of navigation is a significant contribution to the theories of distributed cognition, showing how individuals never perform tasks in isolation, but rather in relation to other individuals and with the material world (Hutchins 1995). Hutchins, and other authors of the third wave, significantly expanded the unit of analysis in explaining cognitive phenomena by introducing the collective dimension, whereby cognitive work can only be fully revealed when it is seen as distributed among individuals, and between individuals and elements of the material environment over time (Hutchins 2001). Central to this assertion is that human cognition is always situated in, and deeply influenced by, a complex sociocultural world (Alby 2014). In this respect, individual cognitive perceptions and actions are necessarily entangled in a diverse milieu of cognitive and normative practices, and institutions and tools that are by definition cooperatively created. In this “ecological” stream of research cognition is not only “extended” beyond an individual’s skin and skull, but is dependent upon and supported by a particular community’s tools, institutions and normative practices.

4 Social learning and communities of practice

To support our proposal of an integrative lens, we take the above approach to learning and knowing in a tangential, yet as we will show, related direction, by considering nodes of synergy between social and work practice observations in practice theory and situated models of distributed cognition. In management and organization studies, the concept of socially situated learning has contributed to the turning point in how knowledge is understood in organizational debates (Turner 1991; Blackler 1995; Gherardi 2001; Gherardi & Nicolini 2004). Indeed, since Lave and Wenger’s

(1991) concept of situated learning reached larger audiences outside of the narrow readings of learning theory, debates within organizational scholarship have, *contra* the knowledge management tradition, begun to recognize a non-banking concept of knowledge (Blackler 1995; Cook & Brown 1999; Tsoukas 1996; Gherardi 2000; Gherardi & Miele 2013; *see also* Hislop 2013). As a result, a growing number of scholars consider knowledge less as information, but more a process of knowing that emerges from participation in a situated activity within a community of practice. In this sense, knowing is conceptualized as inseparable from human activity (Orlikowski 2002; Gherardi 2009; Corradi et al. 2010; Nicolini 2011), and is consequently studied as practical activity (Bruni et al. 2007).

Crucial to understanding the social dimension of learning and knowledge is scholarship that is attentive to ‘newcomers’ in sociocultural practices (Gherardi et al. 1998; Gherardi 2009). This stream of literature allows the inclusion of more social and cultural understanding to knowledge, learning and knowing in management and organization studies (Gherardi 2001). In such studies, asserting a notion of legitimate peripheral participation, permits an analysis of knowledge within practices where the relationships between newcomers and old-timers are perceived to be pertinent (Lave 1991; Gherardi et al. 1998). Suggesting an engagement process in social practices that involves learning as an integral constituent, newcomers are argued to have learnt and acquired situated knowledge by becoming full participants of a practice. These conceptions of situated activity and situated learning are general theoretical perspectives with consequences that go beyond disciplinary boundaries, because knowledge and learning are relational, and even what is considered knowledge must, by definition, emerge from practices and the relationships they are immersed in (Lave & Wenger 1991, p. 330).

In 1997 Stephen Fox, focussing on the differences between traditional cognitive theory (TCT) and situated learning theory, argued that situated learning theory offers much to organizational studies. By overcoming the mind-body dichotomy in perception, this view regards learning as categorically not an individualized process, but rather, one that is conceived as emerging from sociocultural practices. We have already noted how social learning theory emphasizes “communities of practice” that are both exterior, and anterior, to traditional institutional “sites of learning” and highlights how learning occurs in everyday life within and without organized settings (Lave 1988). For situated learning theory, knowledge and learning are created in interaction with the lived-in-world of social and material aspects of practice. Consequently, it does not conceive of knowledge as something contained in the mind, but as something necessarily contextualized and never objective. What is considered as knowledge, then, depends on what practitioners define as relevant to perform the practice, which is always rooted in culturally, socially and materially situated contexts (Gherardi 2001).

According to Gherardi and Miele (2013), the success of the term community of practice is based on the metaphor it is constructed from. The individual is substituted for community as both the subject of learning and the source of knowledge is necessarily a collective legacy. In this respect, agency is not confined to individual minds, and the mentalism that characterizes learning as a static mind passively being filled by a container of *a priori* knowledge, is overcome by a vision of learning as a mind-in-action, embedded in complexities of the everyday world. Learning, then, is conceptually disentangled from the realm of individualized and objective knowledge that is separate from the context of action, but rather, reconstructed as a consequence of being in the world and participating in social practices. It is, therefore, the very concept of knowledge that is modified: redefined from a noun to a verb, ‘knowing’ becomes a collective activity (Gherardi & Miele 2013).

This tradition of knowing in practice, bounded in the concept of community of practice, combines with other practice-based literature under the monikers of “practice-based studies” or “studies of knowing in practice”. These analyses share a principal interest in situated activity, focussing on the role of technologies and artefacts in mediating the relationship between knowledge and the world (Nicolini 2012). For Gherardi (2019), this entails investigating actual practices as spatial-temporal accomplishments using specific tools, discourses, technologies and rules. According to her practice view, practising is not only “knowing how” but also knowing “what next” in a situated practice that is ongoing. Thus, even when a single individual does a job, her performance will refer to a sociocultural practice and how practitioners define the appropriate way of doing the job. Indeed, a practice is always more than the activities or courses of action that have been carried out, it is socially sustained by a normative base (ethical, affective and aesthetic), continually reproduced and contested within the community of the practitioners which supports it.

Four main characteristics of a practice-based approach to work and organization can be distilled (*see* Gherardi 2019; Parolin 2021). The first, already noted, is that practice is always a collectively knowledgeable doing. Mobilizing examples from ethnomethodological studies of coordination centres, for example, Gherardi (2019) explains how coordination arises through different kinds of participation and common orientation. Moreover, with reference to both Hutchins’ and Suchman’s work, she illustrates how the concept of workspace is relationally enacted and introduces the notion of practising as a skilled performance in an equipped environment. The proposal to consider work as a competent performance, helps to overcome the ‘classical’ concept of ‘task’ as individuated, and promotes an understanding of practising as an ongoing accomplishment achieved through collective knowledgeable doing. Second, work practices must be conceptualized as sociomaterial phenomena (Reckwitz 2002). Here,

all practices are necessarily sociomaterial because the social world and materiality are relationally entangled. In Gherardi's epistemology of practice, there is no distinction "between the production of knowledge and construction of the object of knowledge" (Gherardi 2019, p. 82). Third, practice-based studies are conceived as the relationship between work practices and the prevalent normative infrastructure where the practice unfolds (Nicolini 2012; Gherardi 2019). In this regard, the focus is primarily on how practitioners convert norms into resources for action. Thus, norms are not only part of the institutional environment, but participants of the specific communities which enact them. This approach highlights how rules (and protocols) acquire meaning through the shared experience of practitioners who often require additional work to become practically usable (Bowker & Star 1999; Crabu 2014). Finally, a fourth characteristic can be suggested focussing on the role of discursive practices and language as mediators of work activities. In this sense, practising is also conceived as "doing" and "knowing how to do" through the articulation of words. Practice, in this sense, demands to be analysed as a discursive practice that is normatively sustained by a community as part of practitioners' competence. On the basis that it is deployed in discursive practices, this approach opens opportunities to explore expertise and professional competence, revealing how knowledge is embedded in interactions. It is from here that the relevance of such expertise becomes the basis for studying a nexus of practices (Parolin 2020).⁶

For Reckwitz (2002), practice theory is a specific form of "cultural theory" that can take account of what the body does by exploring the embeddedness of mental activities in a collective complex of doings within spheres of discourse defined as routinized body patterns. This makes it an essential tool within contemporary social theory to understand work and collective performances. Indeed, as Nicolini remind us:

The great promise of the practice lens is that of explaining social phenomena in a processual way without losing touch with the mundane nature of everyday life and the concrete and material nature of the activities with which we are all involved.

(Nicolini 2012, p. 9)

To grasp the processual view of organizing, we propose integrating the sensibility from distributed cognition and practice studies for an original voice within "organizational cognition". Using a case from professional theatre, we draw out the central features of our integrative proposal by highlighting how different traditions explain the practice of rehearsing. With greater degrees of nuance, we will analyse how organizational cognition drives professional practices, and shed light on the elements necessary for the emergence of new solutions, what we called everyday creative innovation.

5 The case and the methodology

Our empirical research focussed on the production process of a new play by a small professional theatre company in Italy featuring three actors: two who constitute the company (Federica and Michele) and one hired (Laura). Playwriter and director Carmen, also first author of this chapter, completed the core team.⁷ The play, entitled *Pink Wheels*, was an original work addressed to children and teenagers based on the story of Alfonsina Morini Strada; the first (and only) Italian female athlete in the 20th century to participate in the national cycling race '*Giro d'Italia*'. As the play's presentation materials show, the play's thematic core is the story of women in sport, and particularly women's emancipation from oppressive tropes that inhibit their participation.

Excerpt 1

Alfonsina Morini Strada's biography inspires the play. It is the story of a woman who challenges all conventions at the beginning of the 20th century and decides to become a cyclist. She won many races, and in 1924 she was the first woman ever to take part in the *Giro d'Italia*. Hers is a story of emancipation, but at the same time, it is an anti-heroic story, made of enthusiasm, struggle and high ideals. Alfonsina tells us of two equally strong passions throughout her life: that for the bicycle and that for freedom from gender stereotypes. Nearly one century has passed, but we still need a story like this (excerpt from the presentation text of the play).

The play's rehearsals took place over an intermittent period⁸ from early January 2017 until May 25, 2017 when the play premiered at *Teatro Verdi* in Milan. The ethnographic research was undertaken during two weeks of rehearsals between January and February 2017. During the study, various data were gathered: an autoethnographic diary; interviews; observations; videos and audio recordings. The video data was analysed with a method inspired by interactional analysis (Jordan & Henderson 1995), before being analysed relationally with ethnographical observations, interviews and diary entries from the participants. While Carmen Pellegrinelli, as playwright and director, was perfectly situated to document the creative process at first hand, an additional ethnographer – the second author – was present in the rehearsals room with a notebook and a video recorder. Besides using self-ethnography methods (Valtonen et al. 2017), then, the research team devised additional means (videos, photos, all documents – including draws and scripts-produced by the company and two ethnographic notebooks) to allow a fuller picture of the unfolding phenomenon (Denzin & Lincoln 1995).

Before analysing the data, we want to underline some aspects that characterized the rehearsals of this play, and a further aspect that shows how the scene appeared in the finished production – the grasping of which will enable a clearer understanding of the process. First, when rehearsals began, the playwright/director had produced only a provisional draft of the text rather than a complete script which would be a common expectation in other theatre styles. This initial draft was regarded by the group as provisional, deliberately very schematic, with no specification with regard to movements or characteristics of the scene, and composed of only short dialogues and monologues. Indeed, starting from a first draft proposed by the playwright-director, the group worked collectively and completed the final script during the rehearsals.⁹ For them, rehearsals played a crucial role in the composition of the entire play. As we will show, our approach of focussing on one scene, allows for a more-than-tin description of what emerged from the activities and interactions that took place.

Second, in preliminary meetings the group agreed to use an overhead projector (OHP) and a projection screen synchronous with the acting onstage. The company often uses this theatrical technique in its plays for children as Michele is also a talented cartoonist. This preliminary choice does inform the interactions and way of working during the rehearsals, as it permits multiple presentations of situations and characters onstage – not only ones that embody the actors, but also the addition of rich images in the form of extemporary drawings, illustrations, photographs, or shadows. Therefore, this technique allows for the staging of a series of scenes beyond the ambit of a classical theatrical setting characterized by the presence of actors onstage.

Third, as premiered at Teatro Verdi in Milan one of the initial scenes of the performance, where the protagonist Alfonsina, played by Laura, is chatting with her mother, played by Michele, about her future. The scene depicts the characters and strongly illustrates the nature of the relationship between Alfonsina and her mother, whose desires for her daughter are that she becomes a good embroiderer and marries soon – baldly gendered expectations typical of the early years of the 20th century. Alfonsina however, wants something quite different for her life and is patently bored by her mother's requests and expectations.

The scene is a dialogue between the two characters and is composed of two parts: one is performed behind a screen, showing the actors in shadows (see Figure 9.1) while in the other, the two actors are embroidering together in front of the screen while chatting (see Figure 9.2). Indeed, in the first part, Alfonsina and her mother's relationship is depicted using shadows on a large screen onstage. In this play of shadows, the mother appears enormous compared to the much smaller young Alfonsina (see Figure 9.1).

The second part of the scene which depicts the two characters embroidering together next to a big screen showing the embroideries, sees the mother praise Alfonsina's embroidery skills and looks at the embroidery



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Figure 9.1 Photo of the first part of the scene. On the left is a shadow of the big mother, while on the right is the small Alfonsina. Photo, from the performance, courtesy by Domenico Semeraro.



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Figure 9.2 Photograph of the second part of the scene played by the actors next to the white projection screen showing an embroidery (on the left Michele – the mother, on the right Laura – Alfonsina). Photo, from the performance, courtesy by Domenico Semeraro.

image shown through a projection on the screen (Figure 9.2) but then declares her displeasure at not being able to read what Alfonsina has written in her needlework. The screen shows Alfonsina's embroidered writing of 'I cannot take it anymore', 'help' and 'save me'. The embroideries are key participants in the scene as an ironic contrast between the dialogue and the images (with their texts).

6 The analysis

Staging a play is a collective complex activity that includes, among other things, the composition of specific scenes. This is not entirely determined by the script (and thus by the playwright), nor it is something that is conjured unilaterally from the director's head. Despite some elements being included in the initial script, and others coming from the director, it is only in the rehearsals that all the elements necessary for a scene to emerge are harnessed: ideas are mobilized, assumptions are tested, new ideas emerge, and a final definition of the scene is produced. Our analysis focusses on the contribution of all the participants through situated interactions and participation in rehearsals. Indeed, as the following analysis shows, the scene was composed of the full contribution of all the participants, using the available resources (the draft of the text, the contribution of the overhead projector technique, etc.), and improvisations that added new lines of text.

6.1 Coordination on the fly

On the first day of rehearsals, the stage of the theatre is empty and the scene is waiting to be created. The draft of the script and the group's previous meetings are the only elements that guide the scene creation in the rehearsals room. Carmen, Michele, Federica and Laura sit in a circle on the stage, reading the draft aloud (*see* Figure 9.3). There are three other introductory scenes in the draft. The first is a preliminary monologue by an 'old' Alfonsina assigned to Federica; the second is a first-person presentation by a 'young' Alfonsina, read by Laura. The third is a comic list of duties of the good 19th-century woman assigned to Federica and Michele.

On the first day of the rehearsal, there were several rounds of reading and listening while sitting in a circle. After a few rounds of the reading, the video footage shows Carmen moving, then sitting in the audience space in front of the stage, while Federica reads uninterrupted. Instead of continuing reading in the circle when Laura begins her part, she gets up, goes towards the back of the stage, stops, turns towards the audience, then walks towards the centre of the stage and, addressing Carmen, begins to read her part in a confident voice. During Laura's turn, Federica, who has read her part from her PC, uses it to play a piece of rock music.

It is notable that the change in the director's position immediately changes the group's general disposition and their way of reading (*see*



Figure 9.3 The group reads the first draft of the script sitting in circle. From the left Carmen, Federica, Laura and Michele. Image from the video courtesy Laura Lucia Parolin.



Figure 9.4 In the image a. Carmen leaves the circle to take the audience position. In image b. Laura stands up and starts to act, while Federica adds music. Images from the video courtesy Laura Lucia Parolin.

Figure 9.4). Something has changed in the rehearsals room – Laura starts to read, occupying the stage and using her body while reading her lines. Federica, from the outside, participates in the rehearsals playing a piece of music that contributes to the atmosphere of the scene. A step towards the definition of the scene has been taken.

Analysing the interactions using a distributed cognition framework, it is arguable that the group had experienced a shared cognition, through which, members adapted and coordinated their actions and contributed towards the scene definition. When Laura recognized Carmen’s directing position, she consequently acts by taking the stage to read the text. Indeed, Carmen starts the new phase of interactions by sitting in the theatre, where she can better observe the actor’s work from the audience’s point of view. Without any word or command, her new position seems

to signal a change in reading. Without saying anything, Laura reacts to Carmen by recalibrating herself to the new situation, takes the stage, and makes the first proposal of how Alfonsina's character could be interpreted. Using her body to characterize a style of walking, she designs her initial idea of Alfonsina as a strong, confident woman. Laura looks to be aware that what she is doing (improvising) can become the very first element of the scene: she appears to 'know' that taking the stage¹⁰ mobilizes choices that might contribute to the character and the scene. Equally, the group share a cognitive perception of a situation that is orientated towards the composition of the scene. Without being part of the scene, Federica contributes to it by playing a piece of rock music that is responsive to the characterization of Alfonsina as a strong, independent young woman. At this point, Carmen, Laura and Federica are mutually coordinating their actions "on the fly" towards a shared goal of staging the scene. It is noteworthy here, how members of the group who were not part of the specific scene actively participated in the rehearsals with supporting initiatives. A shared cognition – one that occurs outside the skulls of the participants in their situated interactions – allows them all to contribute to the shared goal of defining the scene.

If we add a practice lens to this analysis, that is to say, integrate the data from the video with other materials from the ethnography, the empirical richness of the combined data helps to draw out observations of competent doing in professional work practice. The logic behind this is that practice-based studies focus on *knowing* how to perform competently when participating in social practice (Nicolini 2012). To elaborate further, the 'coordination on the fly' we first noticed by observing the interactions suggests that we should know something about the group's story and how members are used to working together. As we mentioned, the theatre company participants were used to working with the playwright/director and occasionally Laura. All the previous productions were staged with the same technique that involved having only a provisional draft and working together at the scene in the rehearsal rooms: the group's understanding of rehearsal has thus matured into shared knowledge. We know from the interviews and ethnographic diaries that they are used to working collectively, making extensive use of proposals from the actors who also participate actively in the authorship process. It is the rehearsals where the new play took its form; emerging from a process of deliberation and negotiations, where decisions remain open long enough for the consequences of choices and minor adjustments to be appreciated.

In this unconstrained and relatively fluid environment, however, the group has learnt to frame particular situations that are meaningful to the practice and use them to orientate (and reorientate) the actions. A practice lens allows us to interpret the position of the playwright/director among the audience, as characteristic of the staging practice and thus different from the practice of reading in the circle. The group's theatrical technique

is one that shares a common orientation towards the scene's construction and contributes to reaching it with different kinds of participation: characterization and action proposals (Laura) and supporting initiatives of such as proposing a piece of music (Federica).

6.2 Collective cognitive work of the competent performance

After the first presentation of the *Alfonsina* played by Laura, and following a comic scene about the duties of the good 19th-century woman, the video shows Michele taking to the stage to present the mother's character with a monologue suggested by the playwright's script. However, when Michele stands up with the script in his hands at the centre of the stage reading his lines, he suddenly stops struggling with the uncertainty of addressing the mother's monologue.

Excerpt 1

PLAYWRIGHT/DIRECTOR: Then, starting from now, you become the character [Michele is already on stage at the end of the previous scene in which he interprets another role].

MICHELE: I became the mother...

PLAYWRIGHT/DIRECTOR: Yes.

MICHELE: *Alfonsa, Alfonsa!* Come back here; you don't want the village to gossip about you. You are rowdy!

FEDERICA: [Interrupting the acting] It would be nice if she has a big butt [...slamming a pillow] ... *Afonsa, Alfonsa!*

MICHELE: And then she arrives ... because I am telling her. [He turns from the front orientation to the public to his left, indicating an imaginary engagement with another character in the communication – see Fig. 5].

PLAYWRIGHT/DIRECTOR: She could also be a drawing

MICHELE: Look at your shabby dress!

[...]

MICHELE: Come on, you are so good at sewing. Sit here close to me.

[MICHELE GOES TO FIND A CHAIR...]

PLAYWRIGHT/DIRECTOR: Here, I need to understand if Laura [*Alfonsina's* interpreter] is on stage with you.

MICHELE: Maybe, she could be a drawing before, and then it could be her [in person].

PLAYWRIGHT/DIRECTOR: Yes.

(Minute 7:00 of the video)

In this excerpt the issue of *Alfonsina's* presence in the scene emerges, together with the consideration of solutions to have the character in the scene (as a drawing, shadow or with Laura's physical presence onstage). While reading onstage, Michele feels he must address his reading, and



Figure 9.5 In the image a. Michele is reading his part standing on the stage. In the image b. Michele turns to an imaginary Alfonsina. Images from the video courtesy Laura Lucia Parolin.

his gaze, towards Alfonsina’s character (*see* Figure 9.5). The comment “... and then she arrives ... because I am telling her”, together with his body movement, turning towards an imaginary Alfonsina onstage, activates the consideration of the options to position Alfonsina onstage. Carmen’s idea of introducing Alfonsina through a drawing drives the final choice to depict Alfonsina as a shadow. Moreover, as Figure 9.1 shows, shadows are increased or decreased in size as well as being deformed into irregular proportions. In this respect, the more distant the actors’ bodies are from the light source, the smaller the shadow on the screen appears and vice versa. Shadows allow for the visual expression of the relationship(s) between the characters, which was crucial for the first part of the scene.

A framework rooted in distributed cognition highlights how the creative idea of using shadows for the scene emerges from Michele and Carmen’s interactions in cognitive system (Rogers 1997) – an imaginative process that is not individual, nor individualized, but situated in the interactions. After Carmen responds to Michele’s hesitation over addressing the monologue to Alfonsina, they begin to imagine using other resources to have the character onstage. While we do not see any object onstage in this part of the video recording, the discussion about Alfonsina’s presence in the scene considers possibilities allowed by using the white screen and overhead projection (drawings and shadows).

Thus, we can say that Carmen and Michele, through shared cognitive labour, collaborate to achieve different tasks:

- define the mother’s character;
- understand who is addressed in the monologue while choosing how to have Alfonsina in the scene;
- start to delineate the composition of the scene’s staging (with a white screen in the middle of the stage).

Despite the appearances, these outcomes were not extemporaneous insights of individual minds; instead, they derive from an ecology of interactions

based on shared cognition and imagination, a cognitive work that allows making new steps in the definition of the scene is performed collectively. Hutchins comment on the performance of cognitive tasks is pertinent to this when he suggests that “the group performing the cognitive task may have cognitive properties that differ from the cognitive properties of any individual” (Hutchins 1995, p. 176). Only with the particular combination of inputs can the specific and unique result be achieved.

A practice lens adds analytical understanding to the creative use of shadows, showing how they emerge as the basis of the scene by highlighting the role of the overhead projector (and white screen) in the group practices and poetic. The “*Luna e Gnac*” theatrical company is known in the Italian theatrical community for its children’s plays that use drawings to accompany the performance. Indeed, Michele is also a cartoonist who uses the overhead projection to exhibit his drawings on a white screen. For this reason, Carmen’s suggestion of introducing Alfonsina as a drawing is not a novelty *per se* (neither a creative idea of the director); instead, it is grounded in the professional practices and the unique poetic of the group. Indeed, practice is not only made by humans but also made by objects and technologies that contribute and are necessary elements (Reckwitz 2002). Even if not physically present on the stage during the interactions, the overhead projection and the white screen are elements of the practice of doing theatre (and rehearsals); thus, they have a role in how the way the collective imagination of the group works.

Gherardi (2019) is right to claim that a practice is defined as the accomplishment of a competent performance using the resources available. Nevertheless, these resources for action are not only the physical objects present in a workplace, but also includes all the artefacts, objects, norms, and rules that can be converted into resources for action.¹¹ Members’ orientation towards the object of the practice plays a crucial role in practice theory. In our case, this shared orientation towards the object of the practice, namely the scene’s construction, can be seen in the different forms of participation. It is Federica again who shows us how she participates in the definition of the scene. Although not involved as a character in the scene, she interrupts Michele to suggest a costume for his characterization of the mother: “It would be nice if she has a big butt [...slamming a pillow] ... Afonsa, Alfonsa!”

Notwithstanding that the conversation is about her character, Laura does not participate as actively in the definition of the scene as the others. The community of practice literature helps explain why Laura sits while listening to Carmen and Michele’s conversation. Despite participating in a few plays, Laura is still a newcomer to the group and its professional practices. She had participated in two plays with the group, but only on one occasion was she involved in the staging of a play. Indeed, in the other case, her participation was as a substitute, which meant that she entered into a production that was already stabilized. Thus, compared to the others, she is less used to varying her participation to contribute to the composition

of play as a whole, and even if she knew how the group worked, she focusses instead on her individual tasks (interpreting and characterizing her character). Lave and Wenger (1991) explain the process of socialization and participation of the newcomer to the community of practice through the concept of “legitimate peripheral participation” (see also Gherardi et al. 1998). The learner (Laura) takes part in the ongoing practice (creating the scene), but her participation entails only partial responsibility for the ultimate product. While she feels legitimate in proposing features and actions of her character, she does not feel confident enough to propose other elements for the scene. Even when in the situated interactions, Carmen and Michele are calling her character onstage.¹²

6.3 Attunement

The following excerpt from the video recording shows how, after suggesting that Alfonsina could enter as a drawing, Michele keeps reading his line and the collective work continues.

Excerpt 2

MICHELE: Come on. Sit here close to me ... How skilled she is!

PLAYWRIGHT/DIRECTOR: [Interrupting the acting] Here I imagine a little choreography ... didin, didin, didin. [She moves her arm, mimicking the action of sewing, the loop of the stitch].

[Michele starts to perform the same gesture using the sheets in his hands as if they were the fabric being sewn].

In the excerpt, Carmen interrupts the performance to add a small element of choreography – a sequence of coordinated movements – to the scene, making a gesture not indicated in the draft. Carmen shows a stitching gesture, together with a repeated onomatopoeic sound (see Figures 9.3a and 9.3b; Figure 9.6).



(a)



(b)

Figure 9.6 (a) and (b) The playwright–director is showing the gesture of stitching she wants to be included as an action performed by the characters in the scene. Images from the video courtesy by Laura Lucia Parolin.

While Carmen is making the gesture, Michele starts mimicking her, adding new details to the gesture. He mimics the sewing by using the paper in his hands to support the action. The suggestion of stitching with the assistance of an (imaginary) textile, together with a greater emphasis on the movement made by Michele (exaggeration of the gesture), creates an action that will constitute an essential element to the second part of the scene.

Focussing on this tiny fragment, we notice how tasks in the staging of theatre involve participating in the practice of mirroring and/or exaggerating the gestures to explain creative ideas. It is possible to read the sequence of interactions as Michele's attunement of Carmen's idea of sewing onstage. The concepts of 'mirroring' and 'attunement' certainly help the understanding of how cognition is distributed between the participants of our setting. However, they also help us to see the crucial role of bodies in ecological cognition. Carmen expresses her idea through the use of her body, triggering a similar body movement in Michele. For Hutchins, the way "... cognition became disembodied is clear from the history of the symbolic movement. An important component of the solution is to re-embodiment cognition, including the cognition of symbol processing" (Hutchins 1995, p. 370). Indeed, cognition is embedded, enacted, ecological, extended, and embodied (Secchi & Cowley 2018).

The practice-based approach also emphasizes the importance of bodies within a practice conceptualized as skilled performance. Indeed, according to Reckwitz (2002), practices are routinized bodily activities, interconnected complexes of behavioural acts composed by body movements. If somebody 'carries' (and 'carries out') a practice, she must take over bodily and mental patterns that constitute the practice. Thus, the concept of attunement used by practice studies is strongly related to the importance of the senses, which are central aspects in understanding how knowledge and learning take place.

With the label 'sensible knowledge', practice studies refer to relationships and influences between bodies (Parolin & Mattozzi 2013, 2020; Mattozzi & Parolin 2021).¹³ Strati, for example, explains how knowledge is "perceived through the senses, judged through the senses, and produced and reproduced through the senses" (Strati 2007, p. 62). Similarly, Willems comments that "sensible knowledge urges us to critically engage with what it means to be a skilful practitioner scrutinizing the relationship between the body, knowing, and forms of practice-based learning" (Willems 2018, p. 24). Attunement, then, is how bodies and senses are used to connect, and affect, other bodies and movements. Michele's attunement of Carmen's idea of introducing a choreography does not arise from a mental phenomenon but is grounded in their bodies, senses, and how they participate in the practice. Michele is not merely mirroring, but rather using the director's insight to develop a choreography proposal (i.e. amplifying the gesture), which becomes the basis of future development. Moreover, it is worth considering that in theatre the leading role of the director is inscribed in the

staging of a play. Attunement for Michele is both a gesture that incorporates the director's suggestions and his original proposal of interpretation, something expected from his role as an actor participating in the staging rehearsals.

6.4 Visualizing the absent

Nevertheless, the idea of the choreography is not the only contribution to the scene developed during the rehearsals. In the following extract from the video recording, other essential contributions to the scene arise.

Excerpt 3

PLAYWRIGHT/DIRECTOR: [Interrupting the acting] Ah! Here.

[Mimicking a square]

FEDERICA: [Overlapping] The embroidery.

PLAYWRIGHT/DIRECTOR: The embroidered fabrics need to be shown
[Referring to something previously discussed by the team].

MICHELE: [Improvising] Look how well you can embroider, like no one else!
(Minute 9:14 of the video)

While Michele continues to read the script, sew, hand address an imagined Alfonsina, Carmen interrupts his performance again to add something. She mimics a square, saying "Ah! Here...". Immediately Federica jumped in and finished Carmen's sentence with the words "The embroidery". It is clear how the group share cognition and participate, with different positionings, to the object of work of defining the scene. To better understand the collective construction of the scene, note that Carmen illustrated her idea of using images from a comic book by Jacky Fleming (2016) in the play in one of the preliminary meetings.

Excerpt 4

[...] I had the idea of inserting some ironic drawings from a comic book by Jacky Fleming. The comics showed images of female embroidery with the words: "Help!" "Save me!". Through these embroideries, women were launching subliminal messages to readers, asking to be freed from the slavery of the house.

(Director's auto-ethnographic diary)

Through the last excerpt, it is evident that Carmen imagines comic pictures by Fleming's book projected on a big screen on stage even before she arrives in the theatre for the rehearsals. However, where to locate the images in the play and how to use them was not predefined. Nevertheless, previous knowledge about the use of the images of the embroidering,

together with the sewing within the scene, is enough to make sense of the square mimicked by Carmen. A new meaning of the scene arises from these interactions. The texts of the embroideries (“Help!” “Save me!”) participate in the process of meaning construction of the scene. Through the memory of the images and their texts, the group is able to perceive (without their presence on stage) the juxtaposition between the mother’s invocation for Alfonsina to act according to her gender, and the embroideries which show Alfonsina’s profound unease and willingness to subvert her mother’s requests by carrying out such activities. It is precisely this juxtaposition that gives the scene its ironic meaning.

Elsewhere we called the group’s ability to anticipate – almost mentally visualize – the juxtaposition of the elements constituting the scene as an example of “collective creative imagination” (Parolin & Pellegrinelli 2020). However, this shared cognition is deeply rooted in the elements of the practice. This kind of collective imagination is based on a shared representation of information from the situated network of interactions while relying on the participants’ theatrical professional vision (Goodwin 1994). For the group members – but not for those unfamiliar with theatre practices like the other researcher observing the rehearsal – the stage’s proscenium, even in its vacuum, becomes inhabited by the projection of Fleming’s images that make Alfonsina’s internal world accessible. Nonetheless, it is only by being aware of the group’s familiarity with the projection techniques that we can interpret this anticipation and juxtaposition of the elements on stage as part of their professional vision.¹⁴ After recalling Fleming’s images, Michele improvised a line to include the embroideries in the text “Look how well you can embroider, like no one else!” This improvised line serves to scaffold the perception of the embroideries, while transforming the action of sewing into embroidering. In so doing, Michele offers the occasion to read the Fleming images as Alfonsina’s inner world, giving a full ironic meaning to the scene.

6.5 *Playing with the new meanings*

This shared new meaning of the scene is confirmed by following the interactions that shows how Michele’s inclusion of the embroideries in the scene helps to depict them as Alfonsina’s response to her mother’s gender expectations. It is worth remembering again that during the rehearsal (and, thus, in the video) neither the embroideries, nor the projector or the white screen, are physically onstage.

Excerpt 5

MICHELE: [Improvising] Look how fine you can embroider; nobody can!
 FEDERICA: [Interrupting the acting and performing as the mother improvising]

IT IS a pity that I am not able to read it!

PLAYWRIGHT/DIRECTOR: [Clapping] Exactly, nice, nice! [Collective laughter]

MICHELE: [Overlapping Carmen's exclamation] Look at how precisely you can do it; look at its perfection. Look at it. This is when I regret that I cannot read. I do not understand what you write. What did you write, my dear? [Collective laughter] Cheers to Holy Mary! [Collective laughter]

FEDERICA: [Acting again as the mother] It's a pity I cannot understand.

MICHELE: [Improvising as the mother] It's a pity I cannot understand.

However, I'm a woman from the 19th Century. What can you expect from me? [Collective laughter].

(Minute 9:24 of the video)

This final excerpt shows how, for a short moment, Federica acts in the character of the mother and improvises new text lines. It serves to emphasize the contrast between the mother's speech and the embroidery images, and affirms the mother's illiteracy by revealing that she is unable to read what Alfonsina has written in her embroideries. Federica produces an unexpected creative outcome that is recognized as being comical by the collective. Carmen's clapping, the collective laughter and Michele's replication of the exact phrase proposed by Federica all serve to appoint her proposal to the scene. Michele then progresses with the new improvised lines developing Federica's proposal. Finally, he performs the mother who tries to read and misunderstands every letter in the embroidery, amplifying the comic effect.

The last example of Federica's improvisation clearly shows how the creative outputs emerge not from a personal intuition that is lifted out of the ether but are based on the collective capacity to work *in situ* on the emergent meaning of the scene. Following the situated interactions, we are able to understand how the group works together on the definition of the scene. However, as we have shown, knowing how to work on an emergent meaning is also rooted in specifically theatrical professional knowledge. The practice of staging rehearsals entails testing and trying out how different elements of the play sound, mesh together, and contribute to the meaning of the performance. These tests include texts, objects and bodies – both physically present or evocated – and how they interact, generating meaning to the scene. Playing with projected images without the projector on stage is part of a theatrical knowledge that a newcomer can develop in becoming part of the community of professionals.

7 Conclusion

Using an example of professionals composing a scene of a theatrical play, we have proposed an integrative approach that takes into account insights

from distributed cognition and practice studies. We first observed that these two approaches share interests in professional knowledge mobilized within the ecology of interactions. Indeed, they are both closely attentive to the dynamics of situated interactions, where cognition, perception and knowledge are all employed in the carrying out of complex tasks. The two traditions also emphasize the dimensions of collective working, with both considering the interactions between participants, artefacts, tools and signals from the environment as crucial for everyday organizational activities. At the same time, they offer differently nuanced readings of the same phenomenon. While the lesson from distributed cognition focusses on analysing complex socially distributed cognitive activities (exploring properties and processes in a system of actors), practice studies, in the tradition of social learning, brings to the fore the social role of recurrent actions. We converged these two traditions into an integrative lens as a means to better understand the emergence of mundane creative innovation from the dynamic of situated interactions between the professional members of an organized group (a theatrical company). Using a 'bifocal' lens provides a fresh look at organizational phenomena such as, collective coordination, competent performance, attunement, visualization and improvisation, by taking into account distributed cognition and the sedimentation of knowledge in bodies and groups. Therefore, we are arguing that an integrative lens provides a valuable basis to offer new insights in further exploring organizational cognition.

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The chapter is a collaborative work and has been thought and planned by both the authors. In any case, if for academic reasons it has to have a specific individual responsibility, consider that Carmen Pellegrinelli has written the following paragraphs: (2) A synergy in cognitive analysis?; (3) From extended cognition to distributed cognition; (5) The case and the methodology; (6.2) Collective cognitive work for competent performance; (6.5) Playing with the new meanings. Laura Lucia Parolin has written the following paragraphs: (1) Introduction; (4) Social learning and communities of practice; (6.1) Coordination on the fly; (6.3) Attunement; (6.4) Visualizing the absent. The conclusion (7) and the analysis (6) have been written by both together. We are grateful to the editors of this collection and the two reviewers for their helpful suggestions. We thank Fraser King for the final revision of the English text.

Notes

- 1 For an overview, see the *SAGE Handbook of Process Organization Studies* edited by Ann Langley and Haridimos Tsoukas (2016).
- 2 This strand of literature is part of the broader label 'practice theory' within management and organizational studies (see Nicolini 2012 for an overview).

As Andreas Reckwitz highlights the latter “refers to a group of approaches in late twentieth-century social and cultural theory which highlights the routinized and performative character of action, its dependence on tacit knowledge and implicit understanding. Besides, these approaches emphasize the ‘material’ character of action and culture as anchored in embodiment and networks of artifacts” (Reckwitz 2007, p. 1).

- 3 We are calling this creative innovation mundane as it is part of everyday work practice of theatre.
- 4 Despite Hutchins’ main work (1995) being written before the contributions of authors of the first and second wave, Cash (2013) called the strand of literature coming from his work ‘third wave’ of cognition. We guess, he did that to denote ‘distributed cognition’ as an advancement for cognitive studies. As we highlighted discussing the legacies of Lave and Hutchins, academic debates do not always follow a linear path, but they are often intertwined, and they can have a karst course.
- 5 We avoid rehearsing the rich debate that followed Clark and Chalmers’ in the classical studies on cognition here, rather we are simply calibrating an overview of the approaches in this debate to situate our wider argument. For a more detailed and critical description of the debate, *see* Wagman and Chemero (2014).
- 6 For example, Parolin (2020) presents an investigation of antiviolence counselling, illustrating how legal expertise is performed through discursive practices. Her analysis shows that practice-based approaches to knowing and learning in investigating discourse practices can provide insights on practitioners’ interactional expertise as well as the relevance of the service. While a close look at the actual practices illustrates the lawyer’s interactional mechanisms, the crucial role of legal aid in the antiviolence centre can be appreciated by contextualizing within the texture of practices that characterizes women’s experiences with violence.
- 7 We talk about core of the team because other professionals are involved to take care of particular aspects of the production without being involved in the whole creative process. In particular, in this case, we have to mention the stage designer, the light/sound technician and the costume designer.
- 8 *Contra* the rehearsal practices used by the production of larger theatres; small professional companies are used to working on new productions while still touring the country with other plays in their repertoire.
- 9 Specific genres and traditions in theatre work differently with the script and the text behind a theatre play.
- 10 Elsewhere (Pellegrinelli & Parolin 2021), we offered an analysis of the staging in a contribution specifically addressed to theatrical scholars and literature of rehearsals studies.
- 11 It is worth to notice that considering objects, artefacts, norms and rules as resource for action does not mean only considering how they allow, but also how they prescribe possible actions (Akrich & Latour 1992).
- 12 The specific participation regime has consequences on situated interaction of the practitioners. We can only ask ourselves if a hypothetical prompt arrival of Laura onstage could have stopped further consideration about Alfonsina’s presence onstage.
- 13 Besides explaining tacit knowledge as knowing how bodies (including our body) interact with bodies (Parolin & Mattozzi 2013, 2020), using Actor-Network theory Mattozzi and Parolin (2021) show how by focussing on bodies affecting bodies (human and non-human) it is possible to account for ‘aesthetic practices’ keeping together poiesis and aesthesis.
- 14 Being used to several ways of using the projection in theatre the members of the group can image a big visualization on the white screen with a detail of

the activity of one of the character (Alfonsina's embroideries). It should also be argued that this correlation is part of tacit convention about the use of the images in theatre.

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