

Extending Processual Practice-Based Organizational Creativity

A Case from Theatre



CARMEN PELLEGRINELLI

Extending Processual Practice-Based Organizational Creativity: A Case from Theatre

Academic dissertation to be publicly defended with the permission of the Faculty of Social Sciences at the University of Lapland in Auditorium B126 on the 20th of October 2023 at 12 noon.



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Abstract

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This thesis addresses the conceptualisation of creativity within organisation studies. It contributes to practice-based processual approaches to organisational creativity (OC), a recent stream of literature that emphasises the temporal progression of activities as the basis of understanding the creative phenomenon from a practice-based perspective. To this end, the thesis explores professional practices in a theatre; an exciting field where the materiality of human and non-human bodies matter, and meanings and contents are negotiated in a complex creation process based on specific professional practices.

The thesis contributes to practice-based processual OC by mobilising the epistemology of practice as a theoretical framework for reconfiguring organisational creativity in practice. The epistemology of practice provides a frame for considering the processual, collective and material dimensions of OC. I show how creativity is a complex and multifaceted phenomenon where knowledge, power, performance and sociomaterial dimensions intersect in practice, to stimulate and produce creative emergence.

To deepen the analysis of the creative practices, I enrich the epistemology of practice with analytical concepts from the perspective of distributed cognition and Actor-Network Theory. In conversation with the epistemology of practice, these traditions deepen the distributed and sociomaterial dimensions of organisational creativity, offering additional tools for a more nuanced analysis of the phenomenon. This suggests going beyond the conceptualisation of creativity as the solving of a problem, and interpreting it instead as variant composition practices where relationships are tested, and chains of mediations are produced that generate innovative outcomes.

This dissertation is organised by way of an introduction and three publications that considered the same empirical case about the production of a theatre show for

children, entitled "Ruote Rosa". The production was written and directed by myself, and the empirical investigations were undertaken as a collaborative ethnography by myself and my co-author for the resultant publications.

Research findings demonstrate how the epistemology of practice, with distributed cognition and creativity, and ANT, expand the knowledge of practice-based processual OC, explaining it as a complex multidimensional phenomenon, where different elements meet in practice and give birth to creative emergence. The practical, tacit, sensible professional knowledge of the participants, the power dimension, the sociomateriality and the common orientation of the practice (object of practice), play together and intersect in the creative flow, stimulating and orienting the creative emergence. The thesis documents, and explains, how the dimensions follow each other in a chain of relations that move the process toward something shared and stable; the production of an artifact that, in this case, was a theatre show.

Key words:

ANT; distributed cognition; epistemology of practice; materiality; organizational creativity; practice-based studies; theatre.

Acknowledgments

My path to completing a PhD has been like a hike in the forest. I knew I wanted to explore the forest of knowledge, but I needed to figure out how to get there and what direction to take. The journey began on an almost invisible track in a thick grass meadow where various paths presented themselves, but which one would take me to where I wanted to go? Things became clearer when my supervisors Anu Valtonen and Pikka-Maria Laine came to meet me and showed me which paths I could explore, and where they began. Gradually more aspects of the forest of knowledge became visible; they told me: 'we can show you the beginning, we can give you the tools and equipment you need, but you must write your own story of the journey'.

Pikka ensured I had everything I needed to find the paths of my choice: a compass to stop me going around in circles, a map to keep me grounded, comfortable shoes so I don't trip up on the way there, intellectual food to sustain me, and a warm analytical jacket to wrap my findings in. Then she became like Virgilio to my Dante, my everyday guide on the path. We had long conversations while we walked together in the forest. She always took my proposals of going in different directions seriously, analysing everything carefully and offering me new stimuli for discussion. During the path, Pikka knew how to put my crises in context, warmly supporting me to see the wider landscape through binoculars when I took a wrong turn, showing me greater critical distance than I expected to see.

Anu was also a great inspiration too. She was like a firm hand leading me carefully into the wood. Whenever there was a crossroad, difficulty, or problem, she was there to help me find the direction I needed. She showed me new knowledge streams, where pebbles, plants, insects and small animals roamed in the shape of ideas and concepts. She lit the fire that enabled me to cook the ideas and concepts and see how they tasted. She taught me new ways to see intellectual landscapes, to interpret the signs, and to 'be' with the surroundings. I have always felt seen by Anu and Pikka, and I fully appreciated their interest in my work and the care they took in helping me to navigate the doctoral path.

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My most delightful fortune was to be accompanied in the forest by my co-author and Sagittarian co-explorer Laura Lucia Parolin, from the University of Southern Denmark, who was always with me. She followed and encouraged me from far enough away to give me freedom, but close enough that I was not alone. She was my companion and my first teacher. She taught me how to make a fire, where to find water, and how to defend myself from dangerous animals in the forest. She taught me to be courageous and not fear the world. She has always shared the weight of the backpack, and more importantly the wonder of the landscape when you reach a peak.

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Finally, thanks go to the light in the dark forest, my dear colleague and friend, Fraser King, who helped me establish order in my English, and inspired me to develop a rich vocabulary to describe what was on the path. If you read the thesis and have the impression that it flows; it was achieved with his help. A special thank you also goes to Sarah Childs from the University of Edimburg, a fellow feminist academic traveller and friend who always inspired me to think big. This was my first expedition, but like any good explorer, my passion is for the next adventure.

List of Original Articles

The dissertation is based on the following original articles, which will be referred to in the text by their Roman numerals I–III

- I. Pellegrinelli C. & Parolin L.L., (2022) "A dynamic view of organising: an integrative approach", In Secchi, D., Gahrn-Andersen R., & Cowley S., J., (Eds) Organizational Cognition. The Theory of Social Organizing, London & New York: Routledge, p. 168-197. Copyright © 2022 Routledge. DOI: doi. org/10.4324/9781003169093-11, 168-197. Reproduced by permission of Taylor & Francis Group.
- II. Parolin, L.L., Pellegrinelli, C., (2020) "Unpacking distributed creativity: Analysing sociomaterial practices in theatre artwork" in *Culture & Psychology*. 26(3): 434-453. Copyright © 2020 Sage. DOI: doi.org/10.1177/1354067 X19894936.
- III. Pellegrinelli C., Parolin L.L. (2021) "Post-anthropocentric Rehearsal Studies. A conceptual framework to account for the social and material mediations in performance-making" *Studies in Theatre and Performance*: 1-24. DOI: doi.or g/10.1080/14682761.2021.1979337. Reprinted by permission of Taylor & Francis Ltd, http://www.tandfonline.com.

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CHAPTER 1 Introduction

1.1 Garlic against vampires

The starting point of my work is an interest in theatre as a collective form of art. I am a professional director and playwright who has worked with different theatrical companies. I have an extensive, and successful, track record in staging new plays, at the same time managing various professionals (actors, directors, playwrights), theatrical aesthetics, and production practices (composition of the play from improvisation sessions, production of a dramaturgical play-script). I have always perceived Theatre in general, and the staging phase in particular, as a collective experience where different actors and roles contribute to the process of composition of the mise-en-scène. However, even if plays result from collaborative work, the nature of authorship in Theatre is often perceived as individual. The director, and/or the playwright always signs the show. In this respect, the name of a famous theatre company is always linked to that of a renowned, often male, director. Although there is considerable literature in Theatre Studies on the phenomenon of collectiveness in performance (Heddon & Milling, 2005; Govan et al., 2007; Syssoyeva & Proudfit, 2013a; 2013b; 2016; Vanden Heuvel, 2021), the rhetoric of individual creative genius remains prevalent. Over time, I came to question and critique the cultural dispositive that was based on the 'rhetoric of genius' - which was also marked by a particularly patriarchal nuance.

As a cultural device, it produces narratives that enhance the individual's work while simultaneously cancelling and flattening the work of actors, set designers, technicians, organisers and costume designers. These narratives not only influence theatre spectators, but also the wider literature on theatre, which is based entirely on a pantheon of famous male theatre directors (Gandolfi, 2006). This rhetoric simultaneously resonates with the classical view of creativity as an exceptional quality of the individual, and denies the pertinence of an emergent and context-dependent process.

Before becoming a director and playwright, I was an actress in the same company for many years. The company name recalled the god of wine: Dionysus. For many years I suffered from the fact that my work, which consisted not only of acting but creating the show with others, was considered the work of the director/playwright. Our creative contributions to the shows tend to disappear, dissolved in the narrative of a brilliant playwright who always had new ideas. Despite being tired of the situation, we did not want to leave the theatre company we had created, because

we believed in the group's project, moreover, we all sincerely believed that she was a genius whom we were honoured to work for. I had so completely internalised this idea, that I used to drive 50km to Milan from Bergamo, every day to work for free in the company. I only occasionally took a few bucks for the shows I was in. Finally, as in Agatha Christie's "Ten Little Indians", all the actresses and collaborators of the company left the group one by one. I was the last to leave the theatre company I had stayed in for 12 years.

After the experience with Dionysus, I began to collaborate as a director and playwright at Residenza Initinere of Bergamo, a theatrical residence composed of a group of artists. Part of the Residenza was the "Luna e GNAC" theatre company. Here, my situation changed, and I found myself directing a theatre company for the first time, and facing novel challenges in a new role. It was in this context that I began to reflect on creating theatrical performances as a collective enterprise. The three articles that constitute the major contribution to this dissertation are based on the same case study of the preparation of a play with "Luna e GNAC". That said, the thesis is also inspired by reflections on twenty years of work, first with Dionysus, and then "Luna e GNAC". My critical thinking emerged from observing the professional practices of these groups, and combining them with the theories I encountered in my course of study. Herein lies the force of the thesis. It opens the closed box of theatrical creativity and its authorship, it unpacks it, and tells how each participant (human and non-human) contributes to the collective project. Finally, the thesis takes the form of garlic, a little revenge against the vampires who, in theatre, do not recognise the creative ideas of their collaborators and think that 'the show' is solely the result of their genius.

Being less poetic, and more pragmatic, with my studies of management and organisation, I realised that deepening the case of collective creation in theatre practices would also be beneficial for studying organisational creativity. Organisational creativity (OC) is a recent field of research within Management and Organization Studies (MOS). It focuses on employees' creativity as a sub-area in the field of organisational behaviour (Zhou & Shalley, 2003; Shalley & Zhou, 2008), as well as research on creativity and innovation (Mumford 2012). New processual and relational approaches have recently emerged in OC, which account for the processual and collective dimension of creativity and analyse through qualitative methods, the distributed processes of the organisations (Hjorth et al., 2018; Thomson, 2018; Feuls et al., 2021; Louisgrand & Islam, 2021). I found these approaches particularly interesting, and felt that it could contribute to my own work, which in turn could have an input into the development of this new strand of literature. In particular, I have become oriented toward understanding and exploring the role of sociomateriality in organisational creativity through the professional practices of theatre as artwork. I realised that theatre is both an art form, and a professional field, where the materiality of human and non-human bodies matter. For this reason,

theatre as a field of study, provides an exciting opportunity to explore the role of materiality that is seldom explored in organisational creativity. Therefore, reflecting on my professional composition, I began the search for foundational principles of collective creativity, including humans and non-humans, which I liken to a bulbous clove of ripe garlic against vampires.

1.2 Organisational Creativity: variance-based and processual approaches

Psychological literature generally identifies creativity as the process of producing something new that is recognised as such by a community of experts (Runco & Jaeger, 2012). As Morris I. Stein states: "the creative work is a novel work that is accepted as tenable or useful or satisfying by a group at some point in time" (Stein, 1953, p. 311). Two elements, therefore, define creativity. The first element represents an idea or result's novelty, originality or uniqueness. The second is connected to the perceived utility and its appropriateness, which generates its value (Amabile, 1983; Shalley, 1991; Woodman et al., 1993). OC scholars have adopted this definition of creativity from psychological literature. According to Christina E. Shalley and Amy P. Breidenthal (2021), almost all articles published in top management journals from 2014 to 2020 were slight variants of this definition.

Traditionally, OC focuses on employees' creativity and innovation (Zhou 2008). However, Neil Anderson and colleagues (Anderson et al., 2014) underline how creativity and innovation differ, by distinguishing between the two phenomena as comprised of two different processes of an extended nature. As Jing Zhou (2008) maintains, "in the organizational literature, creativity has been commonly referred to as the ideation component of innovation, while innovation includes both ideation and the application of new ideas (i.e., implementation)" (Zhou, 2008, p. 6). Therefore, creativity represents only the first step of innovation (Amabile, 1996; Mumford & Gustafson, 1988; West, 2002). According to Michael D. Mumford (2012), innovation is an organisational social phenomenon involving exchanges between multiple parties to translate problem solutions and ideas into applicable products, services, and processes (Henttonen et al. 2017). Jan Fagerberg and colleagues (2005) argue that innovation is not just a random invention but a novelty that combines different knowledge, skills, abilities and resources to impact the environment. Therefore, according to the author, organizations must keep up with their rapidly changing environment in order to turn creative ideas into innovative results. Tero Montonen & Päivi Eriksson conceptualize innovation as a practice, meaning that innovation: "is performed by innovation practitioners in a web of actors, activities, knowledge, and material artefacts" (Montonen & Eriksson, 2013, p.108).

Johann Fortwengel, Elke Schüßler and Jörg Sydow (2017) suggest that the OC debate can be divided into two main approaches, one grounded on the variance-based approach and the other based on process analysis. The variance-based approaches correspond to mainstream studies on OC. They scrutinise the effect of an independent variable on a dependent variable, and try to determine favourable or unfavourable contextual conditions for organisational creativity.

As it is widely recognised by the literature (Zhou & Shalley, 2003; Klijn & Tomic, 2010), the variance-based methods in OC are derived directly from psychological studies on creativity. As Jing Zhou and Christina E. Shalley (2003) point out, psychometric, cognitive and social psychology have impacted this area of research defining the two main areas followed in traditional OC, namely the study of individual differences and cognitive processes. This means the traditional field of OC relies on mainstream psychological theorising, explaining creativity as embedded into persons, mental processes or products, and only partially connected to their social background (Glăveanu, 2010).

The variance-based literature on OC produced different theoretical frameworks about creativity. According to the literature (*see* Zhou & Rouse, 2021), two main theoretical models that have guided the area of OC, those of Teresa Amabile (1988, 1996) and Richard Woodman, John E. Sawyer, and Ricky W. Griffin (1993). However, many other theoretical frameworks have been produced over the last thirty years (see Ford, 1996, Drazin, Glynn & Kazanjian, 1999; Unsworth, 2001; Perry-Smith & Shalley, 2003; Zhou, 2006; Bledow, Frese, Anderson, Erez & Farr 2009; Perry-Smith & Mannucci, 2017).

This research is more attuned to what Fortwengel and colleagues (2017) call, processual approaches to OC. These approaches do not focus on studying variables; instead, they stress the empirically evolving features of the creative phenomena, and integrate temporal progressions of activities as foundations of explaining creativity. Processual research thus began to consider the processual and collective dimensions of creativity, and analyses the distributed creative process with qualitative methods (see also Koch et al. 2018). These approaches resonated with my desire to understand the passage of rehearsals, to grasp how a show develops from the collective effort and not from the mind of the director.

Each creation of a theatrical play is a long process. At Dionysus, we often did open rehearsals, where we showed preliminary work of the show to a selected audience to test their effect. This practice helped us understand which parts of the show worked, and which had problems. We used to invite people to our spacious and dusty rehearsal space on the outskirts of Milan. From the smile of the audience, or worse, their silence, we understood if they liked it or not. I remember those moments very well. Directors and actors of other companies would be part of the audience and sometimes they were very critical, leading to a very stressful and anxious atmosphere at the end of the rehearsals. It was often hard just to begin talking. Over time

I realised this was the norm in the theatre world; however, I now recognise it as the creation of unnecessary and intense anxiety. I also remember that if these open rehearsals worked, harmony and good humour reigned between us, but if they did not, the group would experience crisis.

1.3 Taking account of processual organisational creativity

Since variance-based organisational approaches do not recognise the temporal dimension of phenomena (Langley et al., 2013), they cannot consider the process of organisational work. Processual approaches, however, emphasise the temporal progressions of activities as the basis of explaining and understanding the creative phenomenon. Reading organisational creativity with a processual lens means recognising and narrating all the passages that bring creative emergence. According to Fortwengel and colleagues (2017), we can read the processual approaches to organisational creativity with two different nuances. The first is based on a 'strong' process ontology that represents creativity as 'becoming'. This nuance strongly views the process, emphasises organisations' fluidity, and studies how organisations change and evolve. The second, is based on a 'moderate' process ontology, which describes creativity as 'practice' (Fortwengel et al., 2017, p.2). This nuance is based on a practice lens which is able to see the change not as an extemporaneous phenomenon, but as emerging in the line of the recurrent activities of an organisation. Furthermore, this approach concentrates on the relationship between resources and creative processes, considering how certain practices may foster organisational creativity.

To return to theatre, we could analyse with the two lenses how and why a particular scene works. For instance, Dionysus created a satirical show in 2009, (Bastard Night) where we girls bathed in a pool of Berlusconi's sperm to make fun of his patriarchal power. The scene was hilarious and worked very well. Through "creativity as becoming", it can be observed how the scene, with all its comedic significance, emerged in the encounter with the public. This means considering the accidental encounters that lead the funny scene to work in a precise time and space. This approach corresponds more with the analysis of the performance.

In contrast, the perspective of "creativity as practice" allows us to observe not only the impromptu effect of the scene, but all the steps that led to its creation. Each time the scene encountered the public, it renewed its comic strength. However, it was not an improvised scene, but one which came from an extended writing and rehearsing process. This approach corresponds more with the analysis of the theatre show as an output of specific professional practices. In fact, the scene emerged in collective theatrical writing, and was consolidated and matured into a series of feminist cabaret evenings (a sort of open rehearsal), where we gave Berlusconi's sperm to female audiences. The satirical meanings arose by implying that all wanted

a bag of the Prime Minister's sperm, as it would give them a son of Berlusconi. The scene later adopted in the show was a crystallisation of all the games and jokes that had worked during the cabaret evenings.

The first nuance, then, underlined by Fortwengel and colleagues (2017), highlights why the scene worked with an audience in a particular moment. The second explains why the scene worked each time it was performed to different audiences. Taking inspiration from Fortwengel and colleagues (2017), I consider the processual lens on OC as a broad onto-epistemological approach in which it is possible to highlight different aspects of the creative process, depending on the perspective one adopts to look at it (event or practice). I am particularly interested in unpicking how the creative theatrical output emerges in the rehearsal room's nexus of practices, knowledge, discourses and materiality. Therefore, my theoretical proposal contributes more to practice-based processual OC studies than the perspective on becoming and on an event. Practice-based processual OC emphasises the stability of routines and practices while simultaneously considering changes and the collective and material dimensions to organisational creativity.

For example, Miriam Feuls, Marc B. Stierand, Viktor Dörfler, David M. Boje and Jay Douglas Haley (2021) analyse the structure of creative leadership, stressing the dynamic interplay of creative leadership practices which they argue bring new creations into context. Neil Aaron Thompson and Orla Byrne (2022) focus on the texture of practical knowledge that permits entrepreneurs-practitioners to respond to future-making challenges together. Similarly, Nathalie Louisgrand and Gazi Islam (2021) examine the challenges of aesthetic production and the construction of collective aesthetic expertise in the practices of haute cuisine, while Natalya Sergeeva and Anna Trifilova (2018) consider how discourse practices shape creativity in a similar but different line. Finally, Daniel Hjorth, Antonio Strati, Sarah Drakopoulou Dodd, and Elke Weik (Hjorth et al., 2018) explore the conditions that favour play, creativity and entrepreneurship through a procedural lens, rather than looking at these phenomena in vitro. However, a largely negligible element of these practicebased contributions to processual organisational creativity, are focused on the role of materiality in practice-based organisational creativity. For example, Jacqueline Holzer (2012), with an Actor-Network-Theory approach, shows how boundary objects facilitate communication within interdisciplinary teams during a company's crisis. Margot Leclair (2022) explains how creativity can be traced, describing the affective encounters and corresponding atmospheres that emerge during creation. Finally, Cameron Duff and Shanti Sumartojo (2017) draw on Deleuze and Guattari's discussion of assemblage, to define creative assemblage as a more or less temporary mixture of heterogeneous material, affective and semiotic forces within which particular creative capacities emerge. Using theatre, my work, contributes to practice-based processual OC by considering both the distributed and the material dimensions of organisational creativity.

1.4 My theoretical proposal

I propose a practice-based lens on processual organisational creativity by considering it as a distributed phenomenon, equally participated in by humans and non-humans. It mobilises the epistemology of practice (Gherardi, 2019) in connection with close concepts and traditions (distributed cognition/creativity and Actor-Network Theory) to understand how a new artefact emerges from the network of participants into the creative process.

The epistemology of practice offers a way to trace the processual in organisational studies and social theory, by viewing organisational phenomena as dynamic and situated events and not as accomplished facts. At the base of the epistemology of practice are the Practice-Based Studies (PBS), highlighting the routinised and performative character of action depending on tacit knowledge and implicit understanding (Reckwitz, 2007). Davide Nicolini (2012) underlines that all practice theories focus on the importance of activity, performance, and work in all aspects of social life. Consequently, approaches to practice understand the world as a continuous, routine and recurrent realisation. Finally, practice-based approaches emphasise the significance of power, conflict, and politics as constitutive elements of social reality.

For Silvia Gherardi (2019, p. 2), the epistemology of practice, in comparison to traditional PBS, does not answer ontological questions like what practice is (ontology). Instead, it focuses on answering epistemological questions, namely, what practice does (epistemology). This shift entails a change from humanistic approaches to practice that emphasise humans as the primary source of agency (see also Montero & Nicolini 2015), toward posthumanist approaches (Braidotti, 2013), which emphasise the processes of connection in practices, where the agency of humans and non-humans is equally mobilised (see also Parolin 2022).

The epistemology of practice asserts that practitioners are not the primary cause of action, knowledge or even meaning of a practice. Instead, practitioners are the effects of sociomaterial practices in which they are involved, and they are made practitioners because of the encounters with human and non-human elements that participate in the process. Consequently, at the core of the practice are the encounters and relationships whose effects reverberate, and by doing so they give rise to the emergence of something new and transformational so that the participants, for example, acquire new knowledge.

Because the encounters are at the centre of practice, a paradigm is needed to account for the sociomaterial entanglement of all the entities involved. This is why Gherardi asks that we pay attention to material artefacts and physical settings in work and organisation, and attributes a performative role to materiality (Carlile, Nicolini, Langley, & Tsoukas, 2013; Latour, 2005; Orlikowski, 2007), by pointing out the embeddedness and interrelatedness of bodies, artifacts, and situated contexts

as essential features of work (Gherardi, 2009; Reckwitz, 2002; Nicolini, 2012).

The epistemology of practice inspired my proposal on processual OC because it can consider the traditional dimensions of PBS, such as knowledge, power and performativity in creativity, but reinterpreting them with a posthuman sensibility that considers materiality. In this respect, I can interpret the processual OC by setting relationships at the centre of the creative processes, showing how these encounters influence the dimension of creative knowledge, activate power and direct the performativity of the creative process. Thus, the horizon of creativity is not individual but collective; it is based on knowledge developed, shared, and embodied in practice; it engages and embodies dimensions of power and directs participants in one direction rather than another.

Because the encounters are at the centre of the practice and, in my case, the creative process, I suggest that in the context of studying creativity, the epistemology of practice can be enriched by additional theoretical tools that help to uncover what happens in these encounters. In particular, two traditions that have already participated in establishing the landscape of practice-based studies in the early 2000s: distributed cognition and Actor-Network Theory (ANT). As Gherardi highlights, the authors belonging to these approaches began the conversation about knowledge as something collectively accomplished and always situated (Gherardi 2019, pp. 18-19). Distributed cognition and Actor-Network Theory are interesting because they can help deepen the distributed and sociomaterial dimension of organisational creativity between humans and non-humans, offering additional tools for the analysis with different nuances.

First, distributed cognition explains how individuals never perform tasks in isolation, rather they conceptualize the performative in connection with other individuals and the material world (Hutchins, 1995). This approach describes how an action is conducted and thought of collectively, by offering a way to interpret the collective mechanisms that lead to the realisation of a joint action. Furthermore, creativity studies have recently adopted distributed cognition with the label of "distributed creativity". Van Peter Glăveanu (2010, 2014), in using the concept of distribution for defining creativity, redefines creativity as a complex psychosociocultural process distributed and mediated by 'culturally dense' materials capable of generating artefacts that a community can value as new and significant at any given moment. Glăveanu aims to 'put the social back' into the theory of creativity, rejecting atomistic and positivistic points of view, in favour of embracing more holistic and systemic ways of looking at creative phenomena.

Secondly, ANT (Callon, 1984; Callon & Latour, 1981; Latour, 2005) relates to my work by shedding light on how materiality participates in creative processes. In studying the network of stabilisation in the constitution of technology, the STS and its currents, like ANT, emphasise the vital role of non-humans. According to ANT, non-human actors contribute with their presence and agency to determine a course

of action as much as humans. This principle is termed the generalised symmetry principle, according to which, when explaining techno-scientific phenomena, it is necessary to overcome the human or non-human character of the participants (Mattozzi & Volontè, 2020). For this reason, ANT is a fundamental theory for understanding materiality.

In the course of my research, essential concepts from Studio Studies (Yaneva, 2005; Farías & Wilkie, 2016) and the New Sociology of Art (De La Fuente, 2007; DeNora, 2000, 2003; Hennion, 1997, 2015), emerged as two areas of research that adopt ANT's principles. Studio Studies focuses on processes of stabilisation of artifacts within studios (i.e. design or architectural studios) by taking inspiration from how laboratory studies (Latour & Woolgar 2013) account for the stabilisation of scientific facts (Knorr Cetina 1982). Studio Studies was interesting for my research because they focus on the place (the studio) where things are tested and re-tested to lead to a slow stabilisation of the design product. This has a strong similarity to my focus on the rehearsal room, as a place where actors and artifacts meet, test their encounters and lead to the slow stabilisation of scenes and, ultimately, the show. The New Sociology of Art (NSA) also plays an essential role in my research as it applies ANT to art. Using the concept of mediation, NSA gives agency to the artistic product and overcomes the tendency to limit sociological investigations of the arts to contextual or external factors, restoring importance to the aesthetic properties of the object (De La Fuente, 2007, p. 409).

1.5 How the story with my first theatre company ended, and my new story began

At this point, I want to return to my personal story to explain the genesis of my ideas and why I was involved in describing the creative processes of a show. With the show about Berlusconi, I had my first real experience as a recognised playwright. I wrote Bastard Nights together with the director/playwright Dionysus; it was a robust satire against the abuse of female bodies that mixed different storytelling techniques: from characterisation to performance, from stand-up comedy to satirical video. Working as an author and actress performer, I created a scene using my own body, covered in burns (I had an unfortunate accident when I was 21), to make a satirical critique of TV female pageants that were very famous in Italy during the Berlusconi era. The Guardian said about the scene:

(...) But that tirade [here the article refers to two previous monologues made by the actresses], and everything else in the show, pales next to two show-stopping routines. The first skewers the X-Factor/beauty pageant culture, by imagining a world in which burns victims are considered the apex of sexy. (Performer Carmen Pellegrinelli,

flouncing around in skimpy bikini, herself has third-degree burns). The second sees the trio distribute sachets of Silvio Berlusconi's sperm, then strip to bathe in a dinghy full of the stuff, panting "look at me, Silvio" as they splash around. It's dizzyingly bizarre, and a reminder of how thrilling political satire can be when its proponents really let rip (Logan, 2009).

The Bastard Nights show was a baptism for me. I realised that I could write and have the right to be recognised for my work. This recognition was vital because it presaged a change in my life and acknowledged that I could live my professional life differently. So, in 2011, I left my old theatre company and its director, and I happily witnessed the end of Berlusconi's government.

I returned to Bergamo and began collaborating as director and playwright with the "Luna e GNAC" theatre company. "Luna e GNAC" was founded in 2008 by Michele Eynard and Federica Molteni. Michele Eynard is an actor, director and cartoonist. Federica Molteni is an actress and theatre trainer. "Luna e GNAC" produces and stages theatre plays for adults and children in Italy, France, Switzerland and Austria. The theatre company researches non-verbal communication, naturalness on stage, and the mixing and contamination of languages through cartoons, drawings and images.

With "Luna e GNAC", I started to train my directing and writing with a compositional and artisanal creation method. I had the opportunity to be entirely free in experimenting, having as a constraint only the topic of the show and the scarce economic resources. However, I had an equipped workspace available, time, and above all the complete trust of my colleagues. For this reason, working with "Luna and GNAC" became a "creative laboratory" (Parolin & Pellegrinelli 2020a) where I could reflect on the mechanisms of collective composition. Since then, I have consciously and unconsciously thought about issues and questions that have become the focus of my thesis.

In 2017, along with with Federica and Michele, we decided to stage a show about Alfonsina Morini Strada, who in the 1920s became the first and only female cyclist to have participated in the famous Giro d'Italia. This was the moment. I began my empirical research on collective creativity with Laura Lucia Parolin, at the time my partner (now my wife) and an assistant professor at the University of Southern Denmark. As a sociologist of work and organisation with research experiences in design (Parolin 2010a; 2010b; 2010c; Parolin & Mattozzi 2013), Laura was interested in deepening the creative process of crafting a theatre show. Moreover, having concluded my Master's thesis in Clinical Psychology with a dissertation on distributed creativity in theatre, it was the perfect time for developing an active academic collaboration on collective creativity processes.

The show was titled "Ruote Rosa" (Pink Wheels) and was produced for children and performed by actors and drawings. We set up a research project in which we

did a collaborative ethnography (Valtonen et al. 2020) where I was an insider exploring my organization, and Laura was an outsider. The ethnography (Eriksson & Kovalainen 2015) occurred from January to May 2017, when the show premiered in Milan.

1.6 Research questions and execution

This study explores organizational creativity as a processual phenomenon within a practice-based approach. It looks at processual organizational creativity as a complex and multifaceted phenomenon where the dimensions of knowledge, power, performance and sociomateriality intersect in practice, stimulating and producing creative emergence. Therefore, the research is organised around the following questions:

- 1. How can an understanding of processual practice-based OC be extended?
- 2. How does distributed cognition enable a deepening to our understanding of constructing creativity in situational interaction as part the practices of OC?
- 3. What role does materiality play in the practices of OC?

These questions are explored and answered through a combination of this introductory text and three publications. The publications consider the same empirical case, the production of "Ruote Rosa", with each one relating to a particular sub-question. The methodological chapter of this introduction will discuss the particulars of the case study in greater detail, however, for present purposes, I will present a consideration of the publications.

The first published contribution of the thesis is a book chapter, written with Laura Lucia Parolin, for a collection entitled "Organizational Cognition. The Theory of Social Organizing", edited by Davide Secchi, Rasmus Gahrn-Andersen and Steven John Cowley (2022). This contribution is mainly addressed to Management and Organization Studies (MOS) and is relevant to Organisational Creativity as a part of MOS. The chapter offers an integrative approach that jointly reflects on distributed cognition and practice-based studies to contribute to the meso-domain of 'organisational cognition'. The integrative approach mixes the lessons from distributed cognition that analyse complex socially distributed cognitive activities, with practice-based studies that highlight the social role of practice and its recurrent actions in the tradition of situated learning.

The second article, co-authored with Laura Lucia Parolin, was published in the academic journal "Culture & Psychology" in 2020. The article mainly speaks to Creativity Studies. Nonetheless, it can also be relevant to Organisational Creativity, because it contributes to understanding the role of materiality in practice-based

processual OC. In this respect, it fosters a fresh way to consider creativity, and is able to account for the artefact's role in (practice-based processual) creativity. Furthermore, by empirically exploring the professional practices that support the emergence of a new play, the article contributes to the recent debate in Creativity Studies about the processual, collective and sociomaterial dimensions of creativity.

The third article, also co-authored with Laura Lucia Parolin, is published in the journal "Studies in Theatre and Performance." It is explicitly addressed to Theatre Studies, but is also of interest to Organisational Creativity. This article further develops the suggestion of the previous article, showing how the sociomateriality of rehearsal is an essential part of the process of theatre-making. The article introduces the concept of mediation (Hennion, 2012), and explains the significance of tracing networks of mediations (human and non-human) in performance-making. In sum, the contribution claims that tracing the chain of mediations and their transformations, allow Rehearsal Studies to unfold their potential to consider what happens during the performance creation. Moreover, it means giving materials, bodies, and matters in the rehearsal room a crucial role in developing and refining a scene.

1.7 The structure of the thesis

The structure of the thesis is as follows. Chapter two focuses on practice-based studies (PBS) and epistemology of practice as streams of literature mobilised to consider the collective and sociomaterial dimensions of processual OC. The chapter then presents the debate on practice-based processual OC, explaining the relevance of my contribution to the extant processual and practice-based OC studies. The third chapter explores two streams of literature, that consider first the collective, and second sociomaterial dimensions of processual OC. For the former, the theoretical lens is derived from and explores distributed cognition, while the latter delves into ANT, and derived approaches, to consider theoretical and methodological tools for taking materiality into account. Chapter four presents the research and the method used, and explaining how the collaborative ethnography in theatre practice was conducted. Finally, the fifth chapter presents the results of the research. It summarises the three articles before discussing the findings in greater detail. The results speak to the research questions and show how the epistemology of practice understands organisational creativity as a processual phenomenon. Furthermore, I explain how, within the frame of the epistemology of practice, distributed cognition/creativity and ANT help to reveal, and make sense of, the collective and sociomaterial aspects of processual OC. Finally, the conclusion returns to the literature on organisational creativity, showing how the new proposed definition of creativity can offer valuable tools to account for the collective, material and contextual emergence of creative phenomena.

CHAPTER 2 Constructing the context of the contribution

This chapter introduces practice-based studies (2.1) and epistemology of practice (2.2) as the primary theoretical lens to explore processual organisational creativity. The following sections are dedicated to a consideration of the literature on processual OC (2.3) and, in particular, to practice-based processual OC, to which this research contributes. This final section is organised into sub sections that distinguish and describe the different type of practice-based processual OC studies, and develops the argument of how and why the body of research that supports this thesis, makes a meaningful contribution to the field.

2.1 Practice based studies

According to Nicolini (2012), the "practice turn" comprises a comprehensive family of theoretical approaches linked by a web of historical and conceptual correspondences. The roots of practice based approaches can be found in many practice-oriented research traditions, *inter alia*: Marxism, the work of Heidegger, Wittgenstein, the American pragmatist tradition (Nicolini & Monteiro, 2017), Bourdieu's praxeology (Özbilgin & Tatli, 2005), activity theory (Engeström, 2000), ethnomethodology and workplace studies (Garfinkel, 2016) and Scandinavian neoinstitutionalism (Czarniawska & Joerges, 1996).

According to Gessica Corradi, Silvia Gherardi, and Luca Verzelloni (2010), there are three specific research streams at the starting point of the current practice-based organisational studies: studies of learning and knowing phenomena as situated practices (Lave & Wenger, 1991; Brown & Duguid, 1991; Cook & Yanow, 1993; Tsoukas, 1996; Raelin, 1997; Gherardi et al., 1998; Gherardi, 2000); studies of technology as practice (Orlikowski, 1992; Orlikowski, 2002), and studies of strategy as practice (Whittington, 1996; Jarzabkowski, 2003; Whittington, 2006; Laine & Vaara 2015). Under this umbrella of different practice approaches, is a radically new way of understanding and explaining social and organisational phenomena as dynamic and situated events rather than taken for granted facts (Langley & Tsoukas, 2010). According to Nicolini (2012), see the world as a continuous, routine and recurrent realisations which are processual. Reckwitz (2002) states that practices are a routinised type of behaviour, consisting of several elements interconnected to one other, like bodies, objects, subjects, and things being mobilised for a purpose.

The body has critical role in theories of practice (Nicolini 2012). The practices are read as routine bodily activities actualised through the active contribution of a series of material resources. Practices cannot be conceived without bodies, and – as will become clear - even the objects participate in the practice and make it durable over time. As Reckwitz (2002) points out: "At the core of practice theory lies a different way of seeing the body. Practices are routinised bodily activities; as interconnected complexes of behavioural acts, they are movements of the body" (Reckwitz, 2002, p. 251).

The centrality of routinized performance and bodies demands a re-consideration of agency in a specific way. According to Nicolini (2012), in PBS, the human actor is not conceived as a (semi) rational decision-maker, nor is he portrayed as an individual who follows rules and plays roles. Rather, it is who carries and performs the practices that matters. Although individual action is important, it can be conceived and understood only in the background of actions in practice as a source of changes (and thus creativity). Therefore, the focus is not on individual action but on the practice, and the horizon of action, that the practice itself makes available to the agents.

Finally, an essential feature of the practice approach consists in the way it transforms our view of knowledge, meaning, and discourse. Knowledge is no longer an acquisition of information, but a way of knowing that is distributed with others; a set of practical methods developed through learning, inscribed in objects, embodied, and only partially expressed in discourse (Gherardi 2000). In this respect, discursive practices are seen as ways to intervene and act in the world. Finally, practice-based approaches focus on the significance of power, conflict, and politics as constitutive elements of social reality. Practices produce and reproduce social order; therefore, differences and inequalities are always situated in historical and material conditions.

In discussing the lack of epistemological unity in the practice approach, Davide Nicolini and Pedro Monteiro (2017) underline some family resemblances. First, practices are molar, rather than molecular, phenomena that foster several subcomponents. These are usually smaller units of activity given various terms by different authors. Secondly, practices associated with a performative understanding of reality (Latour, 2005) gain sense when organised around an end or goal. For example, Schatzki refers to a teleo-affective dimension that guides all practices (Schatzki, 2002). Thirdly, practices do not exist *per se*, but in configurations like knots, networks, nexuses, and assemblages; as Nicolini and Monteiro (2017) highlight: "we never encounter practices in isolation" (Nicolini & Monteiro, 2017, p. 4). Fourthly, practices have a collective and normative nature that is not abstract (fifth point) but correspond to 'real-life mechanisms' that support the participants in selecting appropriate conduct. Furthermore, the authors explain that practices are inherently material in nature (their sixth resemblance) and are always historically situated (seventh and eighth resemblance). Nicolini and Monteiro also imply that

practice theory has space for creativity because practice is neither mindless repetition nor complete invention. Its indeterminacy and adaptation to every circumstance require continuous change, even in recursion.

2.2 The epistemology of practice

In an effort to conceptually unify PBS, and revitalize their research potential in the light of the recent debates on the posthuman, Gherardi emphasises the epistemological value of the practical lens. According to Gherardi (2019), embracing a practice-based approach means implying practices are the object of research. This move entails shifting from questions about ontology (what practice is) in favour of questions about performativity (what practice does).

Therefore, epistemology of practice is based on a relational onto-epistemology (Barad, 2003; Law, 2004) that privileges neither humans nor non-humans; rather, it focuses on their constitutive entanglements that are enacted in practice (Barad, 2003; Knorr Cetina, 1997; Latour, 2005; Mol, 2002; Pickering 2010; Pickering & Papineau 1995; Suchman, 2007). Furthermore, their relational view rejects the idea of independent realities with well-defined properties waiting to be interpreted (Orlikowski & Scott, 2014) in favour of recognising a relationship and a mutual determination between the entities (Parolin, 2022).

Considering practice as an epistemology demands a reflection that goes further than traditional practice-based studies. Gherardi distinguishes between humanistic approaches to practice that focus on practice conducted by humans, and posthumanist approaches, which emphasise the processes of connection in practices, where the agency of humans and non-humans is equally mobilised (Parolin 2022). According to Gherardi, much of the so-called second-wave of practice theorists, like Bourdieu, Foucault, Garfinkel, Giddens, and Schatzki, are still part of the humanist paradigm (Gherardi, 2021, p. 2). In comparison, the new strand of studies belonging to posthumanist practice theory is now emerging (Cozza & Gherardi 2023; De Vaujany et al *forthcoming*; Gherardi 2021; Parolin 2022; Parolin & Pellegrinelli *forthcoming*; Pellegrinelli & Parolin 2023), linking with contemporary debates on a family of post-epistemologies that blur the boundaries between ontology and epistemology. According to Gherardi (2021), these post-epistemologies are, for example, new feminist materialisms, relational sociologies, affect theory, and post-qualitative methodologies.

First, consistent with traditional PBS, adopting the epistemology of practice entails considering knowledge not as a possession, but as a situated activity. Knowledge is regarded as an activity not enclosed in the mind: "... doing and knowing are not separate and the knowing subject and the object known to emerge in their continuous intra-action" (Gherardi, 2017a, p. 693). This conceptualisation

lies in what has been defined as a practice view of organisational knowing and learning and has its roots in a critique of the rationality of social action. The term' knowledge' is moved to the verb 'knowing' as a collective activity, subtly overcoming the dichotomy between knowing and doing, and involving the situatedness of knowing and learning. As Gherardi points out, this passage entails a different consideration of context: "... as no longer a container of action but a situation in which the interests of the actors involved and the opportunities in the environment meet and are reciprocally defined" (Gherardi, 2021, p. 5). Knowing, then, is not something abstract. Rather, it is the act of being in the world with others, which consequently blurs the dichotomy between subject and object. Being in the world signifies immersing in reality with rationality and the senses and affects (Gherardi, 2017b). Knowing is not only embedded in practice, but it is also embodied in knowledgeable bodies that participate in it. Therefore, as Gherardi highlights, the epistemology of practice stresses that not all knowing is aware, and there is much epistemic work that cannot be considered in terms of the possession of knowledge (Gherardi, 2021).

Secondly, opting for an onto-epistemological trajectory, where there are mutual co-constitutions of the elements participating in a process, means to decentrate the human subject from the centre of the organisational narrative (Gherardi, 2019). Humans are no longer at the centre of organisational accounts as the main source of agency. Instead, agency is a quality that is distributed among a collective of humans and non-humans. This distribution has to be intended not simply as a division of work between humans and non-humans but - as ANT contends (Latour, 2005) - as a mutual influence: humans and non-humans do what they are invited, allowed or prescribed to do by others. I will return to this point in greater detail, in the section on sociomateriality.

Considering how the agency is co-constructed in a complex way, demands an understanding of how power acts as a force that can allow and prescribe actions. In this sense, every relation has a specific condition of power. This is neatly described by Rosi Braidotti: "These conditions include the power that each and every one of us exercises in the everyday network of social relations, at both the micro and macropolitical levels" (Braidotti, 2013, p. 12). Furthermore, situated epistemology (Haraway, 2020), rooted in a materialist notion of embodiment, requires a different and more accurate analysis of both the positioning and power compared to cognitive universalism. An epistemology of practice, in dialogue with feminist theory (Braidotti, 2013), can offer original methods for studying how power works in a situated dynamic of interactions. This is illustrated, for example, by Lave and Wenger (1991), who introduced the concept of 'legitimate peripheral participation' that marks the steps of the practitioner's journey into the apprenticeship, and describes the particular position of the learner in terms of responsibility, participation and power. The same well-known concept of community of practice (CoP) goes into the

placements that participants take within a process of production and legitimation within specific professional communities (Gherardi 2001). For this reason, CoP can be a valuable tool for understanding power dynamics in a professional community.

Thirdly, starting from regarding practice as an accomplishment, Gherardi underlines the collective attachment of practitioners to the object of practice, and shows the plurality and situatedness of their negotiation toward a good practice. The epistemology of practice (Gherardi, 2019) looks at the practices not as matters of fact (something achieved and given as objective), but as a matter of concern (Latour, 2004) and a matter of care; in constant negotiation through the sharing activities of concerning and caring (Puig de La Bellacasa 2011). The practice moves through a negotiated direction, in a mutual co-constituency of the human and nonhuman entities participating in the practice and through the distribution of agency. This direction toward "the object of practice" (Gherardi, 2012) is a movement that does not proceed through different defined stages but is in a flow (Lecture by Gherardi at AMOS conference 2022). According to Gherardi, practising is "knowing how" and "what next" when contributing to an ongoing situated practice. The idea of "flow" into the practice resounds with Mihaly Csikszentmihalyi's reflection on flow in creativity studies. The author describes the flow in creativity as being completely involved in an activity where time flies and every action, movement, and thought follows continuously and smoothly from the previous one (Csikszentmihalyi 1997).

The final pillar of the epistemology of practice is sociomateriality. Relational epistemology argues that practices must be conceptualised as sociomaterial phenomena. According to Gherardi (2019), the social world and materiality are closely intertwined relationally, ensuring that all practices are necessarily sociomaterial. I have mentioned in the introduction, the work of Orlikowski (2007, 2010) who introduced the term "sociomateriality". I also referenced Jones's distinction (2014) between strong and weak sociomateriality. What is worth noting here is that the epistemology of practice is part of a broader conversation of approaches - such as new materialism and posthumanism - which suggest the displacement of the human subject as the central seat of agency, and recognise the liaison between the social as material, and the material as social. In this sense, the epistemology of practice is a posthumanist project that reconfigures the concept of agency within sociomaterial practices.

Therefore, looking at OC through the epistemology of practice, signifies the abandonment of a deterministic idea of creativity, and instead considering it as a complex entanglement of several elements: bodies, artefacts, habits, powers, discursive activity, and concerns. Epistemology of practice then, provides the tools to explain how organisational creativity emerges into the recurrences of doing, and in my case, grasping the situated performative perspective of theatrical rehearsals.

Decentring the subject not only means using practices, instead of practitioners, as the basic units of analysis, but also focusing on the sociomaterial becoming in the

creative act. While much of the research in OC and creative studies is based on reading the individual characteristics of creative people, their practices, moves and strategies, my research focuses on the sociomaterial practices that led to the show's emergence. Furthermore, it implies displacing the assumption of a central human body in charge of the creation, as a means of analysing the distribution of agency and powers that a creative emergence entails. For example, using concepts such as 'legitimate peripheral participation' or 'community of practice' helps to define the social environment in which creativity emerges, recognising the role of each participant. These concepts also help to overcome the traditional idea of the 'field' in OC studies (Feldman, Csikszentmihalyi, & Gardner, 1994) as the place that gathers all the experts' voices who have the skills and the power to recognise and validate an innovation. The community of practice, for example, does not enter into the difference between experts and non-experts in an allegedly "objective way", but considers the dimension of power and accountability as emerging from the context in which the creative emergence takes shape. As stated by Nicolini, there is a tension between creativity and normativity (Nicolini, 2012) and a matter of accountability, which begins with the practitioners themself. Sometimes innovation is recognised only when power conditions are identified as suitable to have made it emerge. The social context determines innovation success much more than the intentionality of the experts.

The epistemology of practice allows the consideration of creative knowledge as emerging and developing in the recurrence of practices. It allowed me to grasp the situated performative perspective of the show's rehearsals, and understand the entanglement between the interests and objectives of us as actors with opportunities of the environment (the rehearsals room, the money of the calls etc.). Recognising this mutual co-constitution between opportunities and actors shifts the discourse of organisational creativity from a universalist perspective to a situated one. Furthermore, considering knowledge and knowing as being in the world with others, is the means to take account of the dimension of bodies, affect and senses in organisational creativity. It explains how the practice configures our bodies, or how they become, through the many practice passages of the sociomaterial creative process.

The epistemology of practice also enables reading the process dimension that drives the creative doing through a flow and towards a shared goal. In this sense, organisational creativity is configured as a movement that involves all the human and nonhuman elements of a situated practice in perpetual negotiation. This aspect allows the consideration that when we create something, we do not always know 'what comes next', but each step necessarily emerges from the previous ones. The encounters between humans and non-humans in the various theatrical rehearsals defined the emergencies and the steps of the process.

Finally, the epistemology of practice focuses on such human and non-human encounters as a means of accounting for the sociomateriality of organisational creativity. It permits the consideration of which things are in the scenes of action,

what artefacts are used in practice (for example, see the white screen below), and how they participate in the creative process. Analysing sociomateriality deepens the understanding of how humans and non-humans joined in the making the show, by asserting that organisational creativity is made by the relationships that arise between all the participants of the creative network. It is the nature of these human and non-human encounters that, in the flow of practice, the heart of the transformations that lead to creative emergence is constituted. For this reason, it is crucial to focus on what happens in these encounters, and equally essential to have the analytical tools for reading it. Following this direction of travel, I propose to enrich the epistemology of practice with two traditions with which a dialogue has been apparent for some time: distributed cognition and Actor-Network-Theory.

2.3 Previous studies on Organizational Creativity

To explain how my proposal to use the epistemology of practice can contribute to current debates in OC, I will my reflections are considered below in the context of the extant literature. This focuses on the literature which has articulated understandings of processual creativity from a practice-based perspective, and has considered the processual as a broad onto-epistemological approach to OC, of which 'creativity as practice' is a part. I have already mentioned that the practice-based approach is not a unified stream, but rather an umbrella of differently related and similar theories (see Nicolini 2012). Therefore, in this exploration of the literature, I will also consider sources that I would argue to be in theoretical conversation with PBS: interactionism, pragmatism, phenomenology and approaches related to the *linguistic turn* (Corradi et al., 2010).

Browsing the practice-based processual OC literature related to my research, I focused on contributions to OC's processual and collective dimensions, those that focused on how collective relationships contributed to organizational process creativity in practice. Furthermore, I consider studies on the role of materiality in OC, namely those that explore how the relationships and the encounters of different elements in practice-based processual OC refer not only to humans, but also non-humans.

In composing this review, I consulted the Web of Science database, selected the relevant journals and searched the string "organisational creativity". The journals that compose the base of the data are the Academy of Management Journal, Academy of Management Review, British Journal of Management, Creativity and Innovation Management, Culture and organisation, Human Relations, International Journal of Management Reviews, Journal of Management, Journal of Management Inquiries, Journal of Management Studies Management Learning, Organisation Science, Organization Studies and Scandinavian Journal of Management.

Searching the term "organisational creativity", elicited a database of 333 articles. I subsequently read and analysed the abstracts, selecting the relevant contents. Most of them were linked to a variance-based approach, a minority took a process approach, and only a very small selection offered a practice-based process approach. As a result, 19 articles were relevant to processual research in organisational creativity with a practice-based lens. Here, I included all the articles that highlight the stability of routines, structures and practices while at the same time paying attention to agency and the possibility of change. Among the nineteen, only five studies take account of materiality in practice-based processual OC.

As already mentioned, I focused on practice-based studies on processual OC, including articles that do not explicitly refer to practice-based studies, but nevertheless use an approach coherent with, or speaking to, PBS. I divided the studies into subsets with similar approaches to providing a reading of this fragmentation. The first subset gathered together studies of processual and practice-based theorising that analyse OC using a philosophical lens (1). I then illustrated those studies that reflect on OC through discursive practices (2). Next, I considered the interactionist-type practice-based studies on OC (3), as well as the studies that use epistemology of practice for understanding OC (4). Finally, after a review of relevant research on these studies, specifying my contribution to them, I consider those that take account of sociomateriality and materiality in OC (5), before offering final considerations about the state of the art and how my proposal enriches this scholarship.

Practices as processes

The first group gathered together studies from processual theorizing using philosophy and literature suggestions to interpret OC. These articles are primarily theoretical, and only one explicitly refers to practice-based studies (Hjorth et al., 2018). The others consider practices related to different philosophical perspectives, like Nietzsche's philosophy, Hegel and Marx's philosophy, the works of Cornelius Castoriadis, English Romanticism and other sources related to psychology literature.

Table 1. Practices as processes

| | Usage of practice theory (or other related theories) | Empirical context and methods | Main findings |
|------------------------------------|---|---|--|
| Hjorth and colleagues (2018) | Deleuze and epistemology of practice; | Theoretical article; | Special issue about organisational creativity, play and entrepreneurship, the authors interpret creativity as arising, as something that overflows and bursts into the organisation's becoming. |
| Thompson (2018) | English Romanticism; | The article is built upon Murphy's (2004, 2005) ethnographic work, which included six months' worth of videorecordings, observations, field notes and interviews of three architects at B+B Architects firm in Los Angeles; | An original theory of the imagination of organisational creativity based on English romantic thought and on the concept of primary and secondary imagination, images and creative expression. |
| Ortmann & Sydow (2018) | Nietzsche's philosophy; the dialectical relations between freedom and constraint in creative practices; | Theoretical article; | It is too simplistic to make creativity coincide with freedom and non-bureaucratic organizations. On the contrary, it is preferable put the accent on the creativity-provoking, generative potential of constraints instead. |
| Harvey (2014) | Dialectical model (Hegel, 1977; Marx, 1967); | Theoretical article on the concept of Creative Synthesis; | The dialectical model integrates group members' perspectives, becoming the basis for producing new ideas. This creative synthesis process increases the chances that each group's ideas will be a breakthrough in processing the output. |

| Rouse (2020) | Literature from psychology and creativity; | Theoretical article; | A theory on how intimate co-creation occurs and how it influences the generation of creative ideas over time. When people create together, they engage in intimate creative interactions, which under certain circumstances lead to the development of a shared interpersonal boundary. |
|--|---|--|---|
| Harrison & Rouse (2014) | Literature on creativity in psychology; | Research on 4 dance groups rehearsals; an inductive, qualitative study using grounded theory approaches; | How groups use dynamics of autonomy and, at the same time, constraint to achieve elastic coordination during a creative project. |
| Komporozos- Athanasiou & Fotaki (2015) | Works of Cornelius Castoriadis; | Theoretical article; | Imagination comprises the continuous production of new images, embracing both symbolic and affective meanings that help as central references for organizing our collective lives. |

In Hjorth and colleagues' special issue (2018) on organisational creativity, play and entrepreneurship, the authors interpret creativity as something that arises, overflows and bursts into the organisation's becoming. They suggest looking at creativity not as problem-solving, but as opportunity. Because "blandness" (Julien, 2007) is at the centre of creativity and organisational life, understanding what happens in the grey zone requires paying attention to the affect of the body and to our sensory capacity. The editors also suggest looking at the capacity to keep the process open in a reliance on distributed or collective leadership. In the same special issue, Thompson (2018) proposes an original theory of the imagination of organisational creativity based on English romantic thought, and the concept of primary and secondary imagination, images and creative expression.

Günther Ortmann and Jörg Sydow (2018) investigate the dialectical relations between freedom and constraint through Nietzsche's philosophy. Exploring the inspiring potential of Nietzsche's piece about arts, "Dancing in chains", the authors aim to identify pertinent themes, issues and questions for creativity in organisation studies. According to the authors, it is too simplistic to make creativity match with

freedom and non-bureaucratic organisations. Rather, it is more generative to put the accent on the productive potential of constraints. They underline the sequence "old chains – dancing – new chains" to provoke and stimulate creativity. This sequence highlights the importance of temporality to creative and innovative practices, particularly the micro-analysis of "dancing".

Exploring how a politically situated theory of imagination can enlighten scholars of organisation studies, Aris Komporozos-Athanasiou and Marianna Fotaki (2015) follow ideas drawn from the works of Cornelius Castoriadis (1922–1997). Castoriadis places imagination at the core of his ontology; he conjures the continuous production of new images that embrace both symbolic and affective meanings which help as central references for organising our collective lives.

Taking a different intellectual trajectory, Sarah Harvey (2014) relies on the concept of synthesis in Marx and Hegel to ground her dialectical model. She considers the collective process as one characterised by groups who possess high levels of creativity, and can only be effectively explained dialectically. To that end, she proposes an integrative synthesis model. Her dialectical model integrates group members' perspectives as the basis for producing tensions, through which new ideas emerge. She argues that a creative synthesis process increases the chances that the ideas of each group will create a breakthrough in processing the output.

Finally, Spencer H. Harrison and Elizabeth Rouse (2014) analyse interactions in modern dance group rehearsals to understand how groups coordinate collective creative work. The authors show how groups use dynamics of autonomy and, at the same time, constraint to achieve elasticity of coordination during a creative project. Furthermore, Rouse has recently written (2020) about how intimate co-creation occurs, and how it influences the generation of creative ideas over time. Nevertheless, both contributions are based on psychology and creativity literature, not practice-based literature.

Practices as discourses

The second group of articles analyse how discursive practices collectively shape organisational creativity. One contribution follows a Foucauldian (1971) approach using critical theory and a discourse lens, while the other relates to the narrative approach and storytelling (Boje, 2008).

Table 2. Practices as discourses

| | Usage of practice theory (or other related theories) | Empirical context and methods | Main findings |
|-----------------------------------|--|--|---|
| Tuori & Vilén (2011) | Discursive practices; critical approach; discourse on power; | Two different kinds of creative organizations, an opera house and a games company; semi-structured interviews and field observations; | 1. Some formal and informal hierarchies connected to the discourse on creativity. 2. The discourse on creativity may lead to a particular way of organizing work and subjectivities in creative organizations. |
| Sergeeva & Trifilova (2018) | Storytelling in organisation and in innovation process; | Twenty-nine semi-structured interviews with innovation managers from UK infrastructure project-based firms; movement back and forth between theory and data; | Storytelling is essential for presenting innovative ideas and getting support from others. It also plays a key role in motivating organizational members to innovate. The image of firms as being and becoming "innovative", is constructed through storytelling. |

Annamari Tuori and Tanja Vilén (2011) adopt a critical approach to examine subject positions and power relations produced within a discourse on creativity. Considering and confronting an opera house and a games company, they analyse these 'creative organisations' through discursive construction in specific practices. The authors also highlight general questions concerning subjectivities and power relations in creative organisations. They first show how formal and informal hierarchies impact creativity, before moving on to suggest that the discourse on creativity may lead to a particular way of organising work and subjectivities in creative organisations. Finally, they provide some significant managerial implications underlying the existence of possible 'hidden' hierarchies offered by the discourse.

Similarly, Natalya Sergeeva and Anna Trifilova (2018) also consider how discourse practices shape creativity, albeit in a different environment. Studying UK infrastructure construction firms, the authors show how storytelling shapes innovation. At the formative stages of the innovation process, storytelling is essential for receiving approval for innovative ideas, taking attention from others, and future refining them. At the advanced stages of the process, storytelling is a way to sponsor innovation to broader audiences and inspire future innovations. According to the

authors, storytelling has vital implications for collaboration between people and organisations, sharing experiences and learning processes. It also significantly affects construction organisations, projects and individual identities and images.

Practices as interactions

The third group of studies I gathered were uniquely interactionist. These articles analyse OC with a close attention to practices, and consider them as collective routinise accomplishments. Even though they refer to practice theory, they do not embrace an epistemology of practice – a distinction I will address more critically at the end of this section. The contributions here focus on the play of interactions leading to the emergence of collective creativity, how creativity is negotiated, how organisational change brings creativity and what conditions foster creativity.

Table 3. Practices as interactions

| | Usage of practice theory (or other related theories) | Empirical context and methods | Main findings |
|--------------------------------|---|---|--|
| Hargadon & Bechky (2006) | Interactionist perspective on OC; | Intensive case studies in professional service firms; ethnographic- research methods; | Collective creativity emerges when social interactions between participants trigger new interpretations. This permits discoveries of distant analogies that the individuals involved could not have created alone. |
| Jeong & Shin (2019) | Interactionist approach, collective learning perspective; | A sample of 454 Korean companies across 16 industries in manufacturing, service, and banking areas, with time-lagged and multisource data; | High-performance work practices led to more organizational creativity when the companies underwent organizational change. The employees' collective learning mediated the interaction effect of high-performance work practices and organizational change on OC. |

| Koch, Wenzel, Senf & Maibier (2018) | Interactionism and processual perspective on OC; attributional perspective on creativity as negotiation process; | A longitudinal, qualitative case study part of a larger research project that involves haute cuisine in Berlin; field observations interviews; adductive movement back and forth between theory and data; | The sequential performance of entre-relating activities (surprising, satisfying, stimulating and savouring) is consequential for the gradual transition of external evaluations of an organization's outcomes, from being considered 'different' to 'one of a kind', and thus the increasing attribution of organizational creativity over time. |
|---|--|---|--|
| Courpasson and Younes (2018) | Interactionist perspective of OC; | Qualitative research in with narrative methods, in the realisation of a secret project within a team in a multinational specialised in the production of healthcare products. | How the secret is built through daily interactions and how these interactions catalyse creativity. Working in secret creates a parallel world that allows the protection of knowledge, responsibility and simultaneously promotes creative work on the project. |

Andrew B. Hargadon and Beth A. Bechky (2006), introduce a model of collective creativity, that describes how the locus of creative problem-solving shifts from the individual to the collective. The authors underline how collective creativity emerges when social interactions between participants trigger new interpretations and involve distant analogies that individuals could not have created alone. Such moments emerge from social interactions that give rise to collective moments of creation. The authors identify four types of social interaction that help collective creativity to emerge: help-seeking, help-giving, reflective reframing and reinforcing.

Embracing a competence-based perspective, Inseong Jeong and Shung Shin (2019), examine whether collective learning is the mechanism through which High Performance Work (HPW) practices increase organisational creativity. Considering collective learning as a behavioural pattern where employees are encouraged to engage in social interactions, the authors suggest it fosters variations, combinations, and validations of ideas allowing for higher organisational creativity. Furthermore, the study examines the behavioural mechanism (i.e., collective learning) through which HPW practices (intended merely as work activities) augment organisational creativity. By focusing on the role of collective learning by employees, the article aims to provide insight into how organisations can successfully manage their employees to improve organisational creativity.

Jochen Koch, Matthias Wenzel, Ninja Natalie Senf and Corinna Maibier (2018), explain collective creativity as an attribution process derived from talking about negotiation. Creativity results from the comparison between 'being creative' and 'being considered creative' that is negotiated in interactions with the external environment. According to the authors, 'being creative' and 'being considered creative' are established as a consequence of four entre-relating activities – surprising, satisfying, stimulating and savouring – through which the attribution of organisational creativity is negotiated. This process corresponds to the gradual transition of external evaluations of an organisation's outcomes, from being viewed as 'different' to becoming 'one of a kind', and thus the rising attribution of organisational creativity over time. Koch and colleagues (2018), place aesthetic responses at the centre of organisational creativity and reveal the playfulness of the process through which the attribution of organisational creativity is produced.

Finally, David Courpasson and Dima Younes (2018) explain creativity in relation to secrecy. The authors' analysis reveals how the secret is built through daily interactions, and how these interactions catalyse creativity. The parallel world created by working in secret, facilitates the protection of knowledge and responsibility whilst simultaneously promotes creative work on the project.

Practice as epistemology

The final group of articles analysed, consider creative interaction from a practice-based perspective, and mobilise theoretical resources directly from the epistemology of practice. These studies develop an understanding of the collective knowledge process by focusing on creative practices. Despite not explicitly referring to the epistemology of the practice, they included an article that grounds the pragmatist tradition evident in this group. The study uses a practice lens for describing how actors collectively cope with constraints in ill-structured problem-solving situations.

Table 4. Practices as epistemology.

| | Usage of practice theory (or other related theories) | Empirical context and methods | Main findings |
|---|---|---|--|
| Feuls, Stierand, Dörfler, Boje & Haley (2021) | Practice based studies (Nicolini 2012); leadership in practice; | A qualitative meta- analysis of literature- based accounts of chefs' creative leadership practices in the context of haute cuisine; | A meta-vignette introducing nine prototypical characters representing patterns of practices that leader-chefs perform as they are foster creativity. Demonstrations about when, and how, leader-chefs employ practices more typically found in facilitating and integrating contexts. |
| Thompson & Byrne (2022) | Knowing in practice (Gherardi & Strati 2012); | A video ethnography of a business modelling programme producing 79 hours of audio- visual recordings; multimodal conversation analysis; | The discursive, embodied and material dimensions of future-making are fundamentally entangled within textures of practical knowledge. |
| Louisgrand & Islam (2021) | Aesthetic collaboration in organisation as a relational-epistemic approach; aesthetics in practice; | A case study of a French haute cuisine programme in Shanghai; | A relational-epistemic approach to aesthetic collaboration, in which aesthetic judgement and relational positioning mutually shape how chef trainees come to understand their creative products. Reflection on the relational-epistemic approach in understanding organizational aesthetics. |
| Lombardo & Kvålshaugen (2014) | Theory of action of Pragmatism; | Twelve projects in two engineering consulting firms; participant and non-participant observations, interviews, background information; patterns and recurring shattering practices; | Constraints are inextricably intertwined with all creative activity. The authors discuss constraints enactment and implications for managing creative action in organisations. |

Feuls, Stierand, Dörfler, Boje and Haley (2021), analyse the structure of creative leadership. They focus on the dynamic interplay of creative leadership practices, arguing that they bring new creations into context. The authors present a metavignette that introduces nine prototypical characters who embody patterns of practices performed by leading chefs while promoting creativity. These descriptions demonstrate how leader chefs use specific practices to facilitate and integrate contexts while promoting creativity. The nine characters (and vignettes) provide a distinctive understanding of creative leadership practices in haute cuisine, that provide a basis for deeper understandings of creative leadership more generally.

Thompson and Byrne (2022), are attentive to the texture of practical knowledge that allows entrepreneurs-practitioners to jointly address the challenges of future-making. The authors underline how in constructing new scenarios for future-making, professionals imply different practices for formulating conjectures, making them visible and organising individual conjectures into a meaningful whole. The article promotes a new understanding of future-making, offering a finer-grained account of practical knowledge, which contributes to theory in several ways. First, it demonstrates that a moment-to-moment texture of practical knowledge determines future-making. Secondly, it underlines that the relevance and meaning of embodiment and materiality are contingent on textures of practical knowledge. Thirdly, the study enriches the literature on future-making by shifting the mode of theorising in a non-representationalism trajectory.

Louisgrand and Islam (2021), analyse the challenges of aesthetic production and the construction of collective aesthetic expertise in the practices of haute cuisine. The authors conducted qualitative research in the context of haute cuisine through the Institut Paul Bocuse, a renowned French culinary institute in Shanghai. The study offers a relational-epistemic approach to aesthetic collaboration, where chef trainees' understanding of their creative products is shaped by aesthetic judgment and their relational positioning. The aesthetic judgment is modelled on the epistemic slipperiness of taste. At the same time, the relational positions of the actors depend on their expertise, competence, or the negotiation of their epistemic authority. The quality of aesthetic collaboration also depends on whether participants read their mutual relationships as antagonistic or integrative, and whether they see aesthetics as a matter of objective knowledge, cultural tradition, or co-construction. Finally, the article explores the implications of the relational-epistemic approach in organisational aesthetics, especially in cultural industries and haute cuisine.

Finally, Sebastiano Lombardo and Ragnhild Kvålshaugen (2014), employ a pragmatist approach to consider how actors – in engineering consulting firms – interact to cope with constraints of ill-structured problem-solving situations, and the implications this has for creative action. In considering their implications for managing creative activity in organisations, they identify and discuss four shattering practices (protesting, proposing, betraying, and sabotaging). Practitioners aware

of these constraint-shattering variations have more opportunities to discover and manage it as and when it emerges. Furthermore, practitioners who see the space of possibility created by shattering practices, can try to react creatively within that space.

Revisiting PB processual OC

To conclude, this short literature review reveals a growing interest in OC by scholars that adopt a processual view of organisational creativity. Several contributions show a synergy with my thoughts on collective creation and situated interaction, and share a relevance to the phenomenon. The studies I gathered under "Practices as interactions" and "Practices as epistemology" are particularly interesting to my research.

Studies on situational interaction (practices as interactions), show how organisational creativity is mainly read as a collective accomplishment, that emerges from participants' interactions. The four articles identify four different types of interaction that serve as the main push for organisational creativity. First, Hargadon and Bechky (2006) see brainstorming as a place where participants trigger new interpretations, and from which new creative outputs emerge. Secondly, Jeong and Shin (2019) identify collective learning as the mechanism through which high-performance work practices increase organisational creativity, while Koch et al., (2018) point to negotiation as an attribution process as the basis of collective creativity. Finally, Courpasson and Younes (2018) use secrecy as an interactional mechanism that acts as a catalyst for creativity.

These studies are relevant because they all emphasise the collectiveness of organisational creativity. According to them, organisational creativity is possible because of the participants' contribution throughout the confrontation, collective learning and overt or covert negotiation. However, these studies privilege humans over non-humans, and tend to see practice in a creative context as mere collective accomplishments or tasks. Gherardi (2019) states that practices are more than activities or courses of action, they are socially sustained by a normative base (ethical, affective and aesthetic) and continually reproduced and/or contested within the community which supports them. Thus, in processual OC, practising should be read as the ongoing accomplishment that is achieved through collective knowledgeable doing. In this sense, confrontation, collective learning and negotiation should not be read as a means to achieve organisational creativity, but rather as the locus where practical and sensible knowledge, articulated through collective knowledgeable doing, emerge and shape transformations in the creative process.

As noted above, I want to give a more detailed consideration of the studies in "Practices as epistemology". It is notable that all the articles are very recent (Feuls et al., 2021; Thompson & Byrne, 2022; Louisgrand & Islam, 2021), propose a practice-based approach to OC, and explore some of the dimensions that I contend

as belonging to the epistemology of practice. I also consider the contribution of Hjorth et al. (2018) as analytically similar despite being included within the section entitled "Practices as processes", because it connects to the epistemology of practice starting from a more philosophical perspective. Feuls and colleagues' (2021) contribution is relevant to an epistemology of practice perspective because it is apparent that it focuses on the dimension of power, particularly how creative leadership can foster creativity in a working group. Furthermore, in describing nine prototypical characters of haute cuisine chefs, the authors consider not only power, but also the perspective of knowledge within the leadership position in the context of organisational creativity. However, this contribution is mainly human-based, with the sociomaterial dimension of organisational creativity not considered.

I would argue that Louisgrand and Islam (2021) go further than the above, as they explore the implications of the relational-epistemic approach to aesthetic collaboration, in an organisational creativity context. The example of the chef trainees shows how their creative products are shaped by their aesthetic judgment and relational positioning. The article quietly suggests an epistemology of practice in OC, by paying attention to aesthetic judgments, and not neglecting the sociomaterial dimension of doing and knowing. Louisgrand and Islam are thus relevant because they describe the dimension of sensible knowledge as emergent from the situated activity of cooking. Furthermore, in moving in the same analytical direction as the epistemology of practice, the article explores the dimension of power, describing the typological positioning of the participants in the practice (antagonistic or integrative, who sees aesthetics as a matter of objective knowledge, cultural tradition, or co-construction).

Thompson and Byrne (2022) travel in the same direction. They consider how the discursive, embodied and material dimensions are entangled within textures of practical knowledge in future-making. Not only do they assert the pertinence to dimensions of practical knowledge central in describing how entrepreneurial practitioners address the challenges of future-making in practice, but they also closely connect this to sociomateriality. Knowledge for Thompson and Byrne is grounded in an immanent perspective where gestures, gazes, and artifacts gain significance in their creative context. For this reason, the article is a key study for understanding OC through the epistemology of practice. Despite saying little directly about the dimension of practice as an accomplishment and placing less emphasis than they could on power, these two aspects are implicitly considered by virtue of using a practice-based lens.

Hjorth and colleagues' contribution (2018), is highly relevant. In an introduction to a special issue, they address the attention on processual ways to interpret organisational creativity, indeed the special issue as a whole, makes salient points about creativity as becoming. In Hjorth et al.'s, view, it is necessary to abandon the idea of an organisation as an organ designed for interest, and move on to the concept

of organisation as emerging, liquid, mobile and always in progress. Considering creativity as a transformation and an emergence, they resonate with the epistemology of practice where bodies, affect, sensitive knowledge, and practical accomplishment is at the centre of the process.

In all studies, considering practice-based OC with the lens of the epistemology of practice, means considering the dimension of practical and sensible knowledge emerging from the creative activity as a practice accomplishment to which all participants cultivate. It also means considering how the dimension of knowledge is related to the extent that power, as either a capacity or possibility, has agency in the creative process depending on a participants' position. Finally, it entails considering sociomateriality, where bodies and artifacts are an integral and constituent part of the organisational creative process.

My research builds on these studies, by gathering together all the dimensions mobilised by the epistemology of practice, in order consider practice-based processual OC. To that end, my focus has been to construct a multi-dimensional/multi-layered approach through the epistemology of practice, to read practice-based processual OC as a phenomenon where the confluence of the dimensions of knowledge, power, performance and sociomateriality constitute the fecundity of the transformation, and therefore of the collective creative emergence. Furthermore, I ground my work in a posthuman practice-based approach (Gherardi, 2019), which permits the further exploration of the sociomaterial dimension of encounters between humans and non-humans in the organisational creative process as the basis of creative emergence. For this reason, I have purposefully considered the literature that connects processual OC to sociomateriality. In sum, my proposal proposes to strengthen the epistemology of practice with related theoretical tools or Actor-Network Theory.

I conclude this section with a necessary methodological consideration. From a methodological point of view, the contributions highlighted (from both practices as interaction and as epistemology) are based on qualitative methodologies. The majority of empirical studies employ semi-structured interviews and field observations (Sergeeva & Trifilova, 2018; Lombardo & Kvålshaugen, 2014; Koch et al., 2018; Tuori & Vilén, 2011), and to a lesser extent, techniques inspired by grounded theory (Harrison & Rouse, 2014), narrative methods (Courpasson & Younes, 2018), ethnography (Hargadon & Bechky, 2006), video ethnography (Thompson & Byrne, 2022) and literature sources (Fuels et al., 2021). Some articles did not have an empirical case and were purely theoretical (Rouse, 2020; Harvey, 2014; Hjorth et al., 2018; Komporozos-Athanasiou & Fotaki, 2015). As I will better explain in the methodology section, my research presents an original qualitative research method based on a collaborative ethnography by two researchers from different positions. Working with data produced by both researchers, we obtained a rich view of the practice studied.

Finally, the literature review highlights the heterogeneity of the context used to study OC. Most articles explored work practices in service, consulting, producing healthcare products, infrastructure innovations and business modelling (Hargadon & Bechky, 2006; Courpasson & Younes, 2018; Sergeeva & Trifilova, 2018; Thompson & Byrne, 2022). Several articles focus on creative industries (Tuori & Vilén, 2011) with a particular interest in haute cuisine (Koch et al., 2018; Feuls et al., 2021). Only one article in the review is based on artistic practice – the rehearsals of four dance groups (Harrison & Rouse, 2014). None of the articles refer to theatre and drama rehearsals as a field to study OC in professional practices. Theatre, as a professional field, is not yet explored by a practice-based processual approach to OC literature.

Practices as materiality and sociomateriality

This section offers a review of five articles that consider materiality and sociomateriality. They are grounded in four approaches (ANT, pragmatism, Deleuze, and affect theory). The following table illustrates their key characteristics like those presented above. In the next section, I will present a deeper excavation of their theoretical sources, the nature of sociomateriality and materiality they focus on, the method contexts and the results. Finally, at the end of the section, I will present my position concerning these studies and the topic, which will reflect a deepening of my conception of materiality.

Table 5. Practices as materiality and sociomateriality.

| | Usage of practice theory (or other related theories) | Empirical context and methods | Main findings |
|---|--|--|---|
| Holzer (2012) | Epistemology of practice; communities of practice; Actor Network Theory; | An high-tech medical company; content analysis of various company's documents; narrative interviews; focus on the role of artefacts in innovation process; | When a fundamental crisis occurs, artefacts within the contingent space of manoeuvre become important. |
| Carlsen, Rudningen & Mortensen (2014) | Pragmatist theory and Practice- based approach to creativity; | Action research project in five firms from different industries; field observations from on- going projects, Interviews, using narrative approaches; | Collaborative artifacts mediate processes of researcher-practitioner interactions and make research more co-generative. |

| Duff & Sumartojo (2017) | Deleuze and Guattari's discussion of the assemblage; | Qualitative research conducted in Melbourne among creative professionals working in diverse fields; | Assemblage thinking suggests that creativity may be characterised in terms of a capacity to link ideas, practices, innovations, materials and techniques in the generation of novelty, provided one accepts that this capacity is widely distributed among both human and nonhuman agents. |
|--------------------------------|--|---|--|
| Margot Leclair (2022) | Affect theory; | Ethnography in a fashion design studio; | Creativity can be traced, describing the affective encounters and corresponding atmospheres that emerge during creation. |
| Bell and Vachhani (2020) | Affect theory / New materialism; | Observation, interviews, field-notes, documents and photographs in 4 craft organisations; | Organisational practice is seen in an affective and materially inclusive perspective that considers humans, non-humans and the forces implicated in the processes. |

The first article by Holzer (2012) is based on ANT and the epistemology of practice. It analyses a company, which specialises in producing innovative hightech medical products and was facing a crisis in its routine process for innovation. Holzer shows how boundary objects facilitate the communication process within interdisciplinary teams during the crisis. Mobilising the concepts of boundary objects and mediators, the author suggests that standardised methods and designed objects, like prototypes, helped to coordinate the heterogeneous knowledge within the interdisciplinary professional community. These boundary objects let members retain boundaries whilst allowing them to cross certain frontiers within a practicerelated structure. However, while standardised methods are concerned to stabilise the cooperation between different team members, it is only in facing a crisis that the active role of the object emerges. Innovation works when a product's material part (in this case, a solenoid and its technical characteristics) is changed. This part of the object becomes a mediator, producing new meaning and knowledge: "The outcome of the project depended finally on the alliances that the solenoid allowed for and the interests that it mobilised" (Holzer, 2012, p.57).

Arne Carlsen, Gudrun Rudningen and Tord F. Mortensen (2014), explore how collaborative artifacts mediate the interaction processes between researcher and practitioner, in ways that make research more co-generative. The authors respond to the scant research on the coproduction of knowledge through socio-material mediated theories in collective creativity. The contribution fills this research gap with a research-action project lasting four years which took account of five companies from different sectors employing a qualitative methodology. During meetings with professionals in those organisations, the researchers discussed a successful idea of their organisation, which used thin categories of A5 paper cards, combining short texts and images to communicate tentative theoretical categories and engage practitioners in theory. The authors show how the use of playing cards, opened new discursive spaces in professional dialogue through tactile involvement, playful interaction and a symmetry of power. They theorise how dialogue was transformed through card games can be understood as a double process. On the one hand, it corresponds to the process of dealing-touching-receiving collaborative artifacts that invites participants to evaluate, compare and combine new ideas, whilst on the other, it corresponds to the subtle thickening of the categories through recognition/ appropriation and expansion/research. Furthermore, the contribution creates a new vocabulary to mediate collaborative research, combining visual and material elements with notions of social poetics.

The third article by Duff and Sumartojo (2017), draws on the discussion on an assemblage by Deleuze and Guattari, to define creative assemblage as a more or less temporary mixture of heterogeneous material, affective and semiotic forces within which particular creative potentialities emerge. They conducted qualitative research among creative professionals working in different fields in Melbourne, Australia. The authors account for the non-human, "more than human" bodies, actors and forces involved in creative work. However, as the authors specify, they do not intend to eliminate the human subject from the analysis of creative practice, but to offer a more "symmetrical" account of creativity between humans and non-humans. Moreover, the authors recognise how creativity and creative practice in an assemblage are not considered innate attributes of individual bodies, but rather a function of particular encounters and alliances between the human and non-human. The study also describes a "diagram" of a local assemblage of creativity drawn from chance and the human and non-human alliances on which it is based.

The final two articles connect creativity with affect theory. Leclair (2022) is attentive to how creativity can be traced, by describing the affective encounters and corresponding atmospheres that emerge during creation. The case concerns a fashion design studio investigated by ethnography. Augmenting a relational ontology to rethink organisational creativity as a phenomenon existing in-between people and objects, Leclair observes creativity through an atmospheric lens that considers the inter-subjective, intertwined and relational forces of organisational life. According

to the author, a materialist theory of creativity should recognise the atmospheric conditions of creativity, and consider atmospheres as spatialised affects. According to Leclair, atmospheres express a "sense of potentiality" typical of creative phenomena, and return the encounters with materiality in a procedural, not static, way. Leclair proposes that materiality within organising is an atmospheric phenomenon, and she describes the designers' encounters with the materials (fabrics) as well as the role of space in shaping the creative atmosphere. In describing the encounters between the fabrics and the designers, Leclair underlines that a fabric has an evocative power, one that becomes an integral part of the process and creates the very condition for the emergence of the idea. The author points out how we can only describe the relationship with the fabric through sensory perceptions, and those materials exist around the designers. In this vision, it is the materials which arouse the designer's emotional connection, which is never predictable.

In the same research trajectory that connects creativity, affect and becoming, Emma Bell and Sheena Vachhani (2020) explore the role of affect in embodied practices of craft-making. Grounded within a new materialist theory, they propose that craftwork emerges in affective organisational relations and intensities that flow between bodies, objects and places of material creation. Organisational practice is seen in an affective and materially inclusive perspective that considers humans and non-humans and the forces implicated in the processes. In taking account of the role of the matter in the encounters, the authors follow Bennett (2010) in focusing "on the affective flows that connect human bodies to their physical and social environments" (Bell & Vachhani, 2020, p. 4). Bell & Vachhani trace the affective atmospheres as spatial and aesthetic formations in which affection emerges. These affective atmospheres give a certain quality to encounters and events, which are collective phenomena irreducible to individual bodies (Anderson, 2009).

Recap on materiality in PB processual OC

This perspective on affect and materiality is fascinating and deserves further exploration. The affective lens provides an exciting way to look at the encounters and the participation of humans and non-humans in the generative process. These works highlight one of the pillars of my proposal: the necessity of studying OC by focusing on the encounters between humans and non-humans. However, my proposal considers materiality from an ANT perspective, focusing on how actors (humans and non-humans) are affected by encounters more than the affective atmospheres of the creative emergence process. To better explain how my proposal relates to the above research, I will outline my position and the theoretical sources that inform my exploration of materiality.

My work draws on Latourian conception of materiality, similar to that presented by Holzer (2012). Holzer's study explores how an artefact can act as a mediator, operating symmetrically with human action. However, using it in a

different context, my work widens the concept of a mediator to include chains of mediations in processual practice-based organisational creativity. My study explains how a theatrical play emerges from a complex chain of encounters of mediators. Furthermore, while Holzer analyses what a mediator does in a context of a crisis (as a problem solver), I focus on what it does in the genesis of a theatrical production, namely how it contributes (among other humans and non-humans) to the process of creating something new.

Similar to Duff and Sumartojo (2017) who employ a Deleuzian conception of materiality, my research does not explore materiality *per se* but rather explores "matter engaged in relations" (Abrahamsson et al., 2014). It is a fine, but nevertheless significant difference, as it conceives of materiality as constituted by relations, networks and encounters of heterogeneous entities. As Mattozzi and Volontè suggest:

The notion of materiality [is] to be understood therefore not as something that precedes our understanding of reality, or which is the result of it, but which is the fruit of the various relationships - in themselves neither material nor ideal - which constitute an assembly (Mattozzi & Volonté 2020, p. 106 my translation).

Following the epistemology of practice, my contribution adopts a conceptual framework interested in understanding what a relation (assemblage), or an encounter (their agency) does, as opposed to what it is (Gherardi, 2019). Some relations in a creative organisational process reach a stabilisation and become something as an output, either an object, or a show (as in my case), whilst others remain less stabilised and consequently are continually in motion, in becoming, in change. In my research, I consider empirically how entities with a specific grade of stabilisation, participate in the slow stabilisation of another, more significant, creative human and non-human entity, like a theatrical show or even a single scene.

This consideration of materiality corresponds to what Jones (2014) defines as 'strong sociomateriality'. This addresses all the concepts that Orlikowski (2010) detailed on sociomateriality - materiality, inseparability, relationality, performativity, and practices - at the same time, whilst a weak version of sociomateriality employs only some of these concepts selectively (Jones, 2014). Indeed, strong sociomateriality draws predominantly on authors such as Barad (2007), Latour (2005) and Law (2004), whose work sits within a fully relational ontology in which entities only exist in relation to others. In Actor-Network Theory, materiality is not theorised as inert, nor simply as something in the background for human activity. On the contrary, materiality is conceptualised as agentic, with multiple non-human and human sources with capacities to affect. For this reason, besides Holzer (2012), I also consider my research close to Duff and Sumartojo (2017) whose study follows Deleuze and Guattari's reflections on an assemblage.

Contra the strong approach, in the weak approach of sociomateriality, only some of the elements proposed by Orlikowski are considered. For example, Leonardi (2013) argues that the social and the material exist independently of each other, and it is only in their conjunction with human practices that the become 'sociomaterial'. An example of this weak sociomateriality is the article of Carlsen, Rudningen, & Mortensen (2014), where artifacts are not intended to act in intra-actions but as mediators in the interaction processes between researchers and practitioners. Given the nature of my position, one which adopts an approach of strong sociomateriality, my argument is intellectually closer to the studies of Holzer (2012) and Duff & Sumartojo (2017), than that of Carlsen, Rudningen and Mortensen (2014). Moreover, it is pertinent to draw attention to a methodological implication of my research to conclude this chapter: collaborative ethnography and theatrical production – key elements of my research – are innovative, in terms of the field and a methodological approach, in the context of the scholarship of which these articles form part.

CHAPTER 3

Reinforcing the epistemology of the processual OC practice with distributed cognition-creativity and Actor-Network theory

This chapter further discusses the theoretical framework of the epistemology of practice that focuses on practice-based processual OC, explaining the contribution of distributed cognition and ANT. First, in section (3.1), distributed cognition/creativity is presented. The following section (3.2), describes this approach as relevant for enriching the contribution to practice-based processual OC, explaining, in particular, the collective aspect of distributed creativity. Section (3.4) concentrates on Actor-Network Theory, defining (3.5) why it is crucial for explaining the sociomaterial aspect of practice-based processual OC.

3.1 Distributed cognition and creativity

The Distributed Cognition approach originated at the University of California at San Diego in the mid to late 1980s by Ed Hutchins and his colleagues. The idea is to create a new paradigm to rethink all domains of cognitive phenomena. This new paradigm aims to revolutionise the traditional view of cognition as a localised phenomenon of information processing at the individual level. Instead, Hutchins states that cognition is best understood as a distributed phenomenon, theoretically and methodologically, based on cognitive sciences, cognitive anthropology and social sciences.

This approach was born in cognitive science conversation about the extended mind. The extended mind approach (Clark & Chalmers, 1998) refuses to consider the mind as something that lies exclusively within physical boundaries and takes a step towards an externalised conception of the mind. Menary's (2006) cognitive integrationism submits the so-called hybrid mind's thesis: that the external resources supporting cognition do not duplicate mental processes, but rather they complete and increase them. Finally, Hutchins' theorisation on distributed cognition suggests that mental and social planes are integrated within a broader cognitive system. He reveals how people in isolation cannot perform tasks by noting that every action always takes place concerning other individuals, the material world and in a complex, intersubjective process of coordination. Hutchins (1995) expands the unit of analysis for cognitive phenomena by introducing the collective dimension. Cognitive work

is distributed among individuals between the elements of the material environment and over time (Hutchins, 2020).

According to Rogers (1997), distributed cognition states that cognitive phenomena are distributed not only through individuals but also through artifacts. In particular, internal and external representations of a common language of "representational states" and "means" contribute to distributed cognition. For example, distributed cognition analyses the properties of processes of a system of actors interacting with each other and an array of media or technological artefacts to perform some activities. By media, distributed cognition means both internal (e.g., the memory of an individual) and external (e.g., maps, graphs, computer databases, doodles, etc.) representations. States of representation refer to how different knowledge and information resources are converted in an activity's performance. For example, professional language is an element that participates in developing distributed cognition within a work group.

This approach eliminates the historical divisions between the internal/external boundary of the individual and the cultural/cognition distinction. The method adopted seeks to apply cognitive concepts to the interactions between human actors and technological devices by studying collective work contexts. Furthermore, the approach integrates this analysis with other concepts from the social sciences, such as intersubjectivity, organisational learning and division of work.

Distributed cognition facilitates the adoption of different units of analysis to describe a range of cognitive systems (Hutchins, 1995). This allows for the identification of a set of cognitive properties at each level of the description of a cognitive system. A cognitive system is a complex system that learns and develops knowledge (Bade 2008). This "system" can be human, but it can also be a group, organisation, or computer. It participates in human cognitive processes by providing useful representations to increase the cognitive abilities of human agents.

In the wake of Hutchins' theorisation, Sawyer (2012), Sawyer and DeZutter (2009) Sawyer et al (2003) and Glăveanu (2010; 2014) highlight the connection between distributed cognition and creativity, proposing the "distributed creativity" label. Within this theoretical framework, Sawyer and DeZutter (2009) recognise how creativity is always a collective expression of a social group and creative products are generated by collaborative networks between people (Sawyer, 2012; 2014).

Glăveanu (2010; 2014) proposes reading the evolution of the debate on creativity through a general framework composed of three paradigms. The first paradigm, the He-paradigm, also called the "genius stage", collects the theoretical traditions that have historically conceived creativity as an extraordinary individual quality (Schaffer, 1994). The second paradigm, I-paradigm, is linked to the first psychological studies of creativity (Guilford, 1967; Guilford, Merrifield, & Wilson, 1958; Barron 1963; Parnes & Harding, 1962). The I-paradigm focuses on the individual as a unit of analysis, but replaces the genius with the ordinary person. In other words, the

I-paradigm represents the democratisation of creativity (Hulbeck, 1945; Weiner, 2000; Bilton, 2014). Under this perspective, everyone is allowed to be creative, and creativity is no longer characteristic of a few selected by God or biology but a property common to all individuals, that must be understood and cultivated. It is only with the last and third paradigm that a radical change of perspective from the idea of creativity as an individual and mental quality to a systemic relational process involving individuals and the environment occurs. The third paradigm, Weparadigm, brings the social dimension into the studies on creativity and embraces a more holistic and systemic vision of creativity.

In short, the We-paradigm aims to "put the social back" into the theory of creativity. Rejecting atomistic and positivistic standpoints and adopting more holistic and systemic ways of looking at creativity, psychologists promoting the We-paradigm acknowledge the social nature of creativity and view it as a process derived from transactions between the self, others and the self, and the environment (Glăveanu, 2010, pp. 5–6).

How distributed cognition/creativity helps to trace interactions in OC

Distributed cognition (Hutchins, 1995) and distributed creativity (Glăveanu, 2014) are powerful and pivotal theoretical concepts for explaining how cognition is shared between the participants in organisational or creative processes. Nevertheless, they are not taken into consideration in recent accounts of OC. Instead, this lens is recently used broadly within the creativity debate under the label of sociocultural creativity (Miettinen, 2006; Glăveanu, 2014; Glăveanu et al., 2020; Sawyer & DeZutter, 2009).

As we have seen, distributed cognition is one approach that participated in the broader conversation about knowledge that gave rise to the practice-based approach (Gherardi, 2019). Bruni, Gherardi and Parolin (2007), as carries of a PBS perspective, frame the relationship between PBS and distributed cognition in this way: "We are indebted to the latter (distributed cognition) for many reasons and, in fact, they have paved the way for the shift from knowing-as cognition (seen as a mental activity) to knowing-as-a-situated-accomplishment that is something people do together" (Bruni, Gherardi & Parolin 2007, p. 86). Bruno Latour also recognises that distributed cognition can be part of the corpus of ANT studies (Latour, 2005, p. 11), because, although it has a cognitive basis, it gives non-humans a type of agency that is more open than the traditional natural causality.

Distributed cognition and creativity helped me figure out how collective cognition, perception, and knowledge are all implied in the creation of a scene for a theatre show. The tradition of distributed cognition provided me with several conceptual tools for analysing complex socially distributed cognitive activities (Hutchins, 1995; Hutchins, 2020; Cash, 2013). In particular, this perspective made me reflect on how the group's cognitive and knowledge production is not equal to

the sum of individual contributions. I noticed that the group works as a single actant/unit (actor in ANT terminology), a system that develops its own negotiated way of carrying out the action. This negotiation is made up of actions and relationships that are sometimes not expressed in words. This approach helped me to realise how coordinated movements, attunement, shared memories, insights, and improvisation are fundamental parts of the practice of creation.

Furthermore, it allowed me to take into account all those aspects related to the collective imagination (Parolin & Pellegrinelli, 2020b), or the ability to prefigure possible effects of the scene during the work practice. For example, I delved into the concept of collective creative imagination as "the ability to read and forecast emergent meanings of a scene in the encounter of textual-verbal and iconic texts is a specific theatrical professional knowledge" (Parolin & Pellegrinelli, 2020b, p.7).

As I will show in the section where my results are presented, distributed cognition, when merged into the epistemology of practice, can provide a valuable way to account for collective creative processes in professional practices.

3.2 Actor-Network Theory: the difference between intermediaries and mediators

Michael Callon and Bruno Latour proposed the sociology of translation (known as ANT) at the beginning of the eighties (Callon, 1984; Callon & Latour, 1981). According to ANT, knowledge and techno-scientific facts result from the activity of networks of actors that momentarily align themselves with a specific course of action. The networks are not stable per se but stabilise themselves through maintenance work. As indicated by Latour: "Social, for ANT, is the name of a type of momentary association which is characterised by the way it gathers together into new shapes" (Latour, 2005, p. 65). As Gherardi argues, we must seek the meaning of actor-network theory about the process through which a network, made up of a heterogeneous plurality, acts as a single actor (Gherardi, 2000, p. 63). Indeed, Callon (1984) points out that the actor-network is an entity acting as an actor while being structured as a network of actors. According to Mattozzi and Volontè (2020), if a network works effectively, it usually stabilises knowledge and techno-scientific facts to the point that they appear objective, like truths. Yet they are, nonetheless, products of the network's activity as a whole.

Furthermore, the network components (actors or, as we will see, actants) are not only humans but also non-humans. Non-humans also determine a course of action with their presence and agency. According to Latour (2005), non-humans are fundamental participants in each human course of action because they impact it, making a difference. It is crucial to note that highlighting non-human participation in action does not mean the action is determined only by objects. For example, as

Latour says, baskets do not cause the fetching of provisions, nor do hammers impose the striking of a nail. In ANT, the continuity of any course of action consists of chains of humans and non-humans connections, as Latour maintains: "things might authorise, allow, afford, encourage, permit, suggest, influence, block, render possible, forbid, and so on" (Latour, 2005, p. 72). Therefore, Latour suggests substituting the term 'actor' with 'actant', which designates a principle of agency linked to an entity without being human.

According to Latour (2005), social dynamics result from the manifestation of materiality through which they unfold. Objects, and other non-human entities, are not passive but affect people by making them do certain actions. Latour distinguishes between actants that act as intermediaries or mediators in a chain of relationships. While intermediaries are passive bearers of someone else's contribution, mediators act as the active element that contributes to changing the course of action.

A properly functioning computer could be taken as a good case of a complicated intermediary while a banal conversation may become a terribly complex chain of mediators where passions, opinions, and attitudes bifurcate at every turn. But if it breaks down, a computer may turn into a horrendously complex mediator while a highly sophisticated panel during an academic conference may become a perfectly predictable and uneventful intermediary in rubber stamping a decision made elsewhere (Latour 2005, p. 39).

An intermediary can be significantly complicated but non-relevant for the action to occur. On the other hand, a mediator can be very simple, but it may lead in multiple directions, changing all the accounts attributed to its role. Therefore, for ANT scholars, as in the epistemology of practice, "the social" is an effect that is produced and studied by following the associations between human and nonhuman actants (Latour, 2005).

For ANT, the social, the institutional, the conceptual and the material relate dialectically. Therefore, to study their configurations, it is unnecessary to assume any of these a priori; it is enough to empirically follow their associations (Gherardi, 2000, p. 56).

Considering organisational creativity with the ANT perspective changes the positivistic view of the phenomena as a problem-solving, conceiving creativity more as construction or composition (Mattozzi & Parolin 2021; Parolin & Mattozzi 2020; Parolin & Pellegrinelli 2022; Parolin & Pellegrinelli *forthcoming*). Inquiring about creativity means mapping the networks of participants (actants) that takes part in the creative process and understanding how relationships between different actants bring novelty emergence. Creativity does not reside in the mind of one human individual; instead, it is distributed in the sociomateriality of creative practices.

There are two main strands where ANT has been applied to grasp creative practices: the new sociology of Arts and Studio Studies. Studio Studies is a recent label that Ignacio Farias and Alex Wilkie (2016) used to bring together studies interested in design practices in various fields. Indeed, many studies interested in analysing different design practices have been carried out during the last twenty years (Yaneva, 2005; Vinck et al., 2003; Storni, 2012; Parolin, 2010a). These authors took inspiration from laboratory studies (Latour & Woolgar, 1986; Latour, 1987) and science and technology studies focusing on processes of stabilisation of artifacts (Bijker et al., 1987; Bijker & Law, 1994; Latour, 1996), closely investigating working and organising practices. By studying what occurs within professional studios, this literature has illustrated the interactions with other actors and agents who participate in articulating a new artifact (Parolin, 2015).

The "New Sociology of Art" stems from the criticism of the sociology of traditional art that considers the artistic object exclusively as something contingent on social relations (see, for example, Bourdieu 1984), and it is inspired by STS and ANT (De La Fuente, 2007; DeNora 2000; 2003; Hennion 1997, 2007; Eyerman & Ring, 1998; Fox, 2015; Strandvad, 2009). The New Sociology of Art (NSA) wants to overcome the tendency to limit sociological investigations of the arts to contextual or external factors, restoring importance to the aesthetic properties of the object (De La Fuente, 2007, p. 409). Therefore, the artistic object is not a passive product but an entity that acts in the world through its material properties. For example, Tia De Nora (2003) draws on Latour's framework to show how music is co-produced with material and the social and how it has the potential to act in the world.

To understand how the art object, or cultural product, be it material or immaterial, operates in the world, it is necessary to map the networks of relationships in which it is inscribed. Like ANT, NSA investigates the social relationships in which the work is rooted and reproduced and the material relationships in the practices that produce it. Music sociologist Antoine Hennion, working with and inspired by Latour's theorisation, identifies the concept of "mediation" as central to investigating the networks within which cultural products emerge and addresses the question of the cultural object in the same way that STS considers the scientific object (Hennion, 2007; 2012). We can define mediation as a modification operated by an actant who acted in the network as a mediator. Studying the work of art as mediation means examining the associations of bodies, habits, materials, spaces, languages and institutions of which it is composed. Hennion proposes a model based on the sociomateriality of becoming (Deleuze & Guattari, 1980) where the work of art is continuously transformed and recreated through each step and transformation of the chain of mediations (Pellegrinelli & Parolin, 2021).

As the strands of research of Studio Studies and the New Sociology of Art demonstrate, ANT provides the theoretical background to grasp the role of materiality in creative practices. Nevertheless, despite being interested in explaining

the emergence of new cultural artifacts neither Studio Studies nor NSA connects their theorisation to creativity studies. Thus, I propose to use ANT to enrich creativity studies and OC to grasp the role of the nonhuman in the practice base creativity.

How ANT and related theories help to trace materiality in OC

As illustrated, materiality is least taken into consideration by OC studies. None of the OC traditional mainstream literature reviews (Joo, McLean & Yang 2013; Indriartiningtias & Hartono 2017) takes account of materiality in creative processes or explicitly refers to materiality in any way. Within processual OC materiality is slowly beginning to be considered, but there is room for further development. Few scholars only focus on the role of the material in the creative processes. To my knowledge, they are the already mentioned Holzer (2012), Carlsen, Rudningen, and Mortensen (2014), Duff and Sumartojo (2017), Leclair (2022), Hargadon (2021).

If OC does not mainly consider materiality, it is a hot topic in the recent literature on sociocultural creativity. For example, Lene Tanggaard (2013) studies the sociomateriality of creativity in everyday life, anchoring creativity to social practices.

Despite not being considered in OC, the attention to materiality is not new in MOS. For example, Wanda Orlikowski (2006; 2007; 2010) uses sociomateriality - without the hyphen - to point out the role of materiality as an integral aspect of organisational activity. Orlikowski rejects the ontology of separateness that sees technology and humans as essentially different and separate realities. In 2001, Schatzki (2001) pointed out that streams of research on materiality push practice theory toward a posthumanist approach. Not by chance, the collection that promotes "The Practice Turn in Contemporary Theory" (Knorr Cetina et al. 2001) hosts scholars who promote acknowledge that non-human entities constitute human sociality (*see*, for example, Michael Lynch, Karin Knorr Cetina, and Andrew Pickering coming from social studies of science). Thus, it is safe to say that the practice turn arising (also) in MOS is rooted in the posthuman sensitivity promoted by social studies of science.

To consider materiality and sociomateriality in the creative process through a practice-based approach, I follow Orlikowski's lead on relational ontology and Schatzki's indication to connect PBS and STS. A relevant aspect suggested by STS, crucial for my work, is the invitation to consider creativity not as problem-solving but rather as construction. As pointed out by Studio Studies, to understand how a creative outcome is built, it is necessary to study the places (studios or laboratories) where it is produced. Following this indication, I focused on the rehearsal studio where the show emerged. It is only within these places (studies, laboratories or the rehearsals room) that it is possible to investigate creativity as a process, observing and ordering the actions and the transformation through which something new is patiently built. According to Federico Neresini: "a laboratory is an organised

set of heterogeneous actors engaged in transformation processes that allow us to extract order from disorder" (Neresini 2020, p. 47 *my translation*). Studying the laboratories' activities from the inside makes it possible to grasp the emergence of the set of heterogeneous components which nourish creativity in action.

Another significant element which has been beneficial for my creativity research is the STS capacity to account for non-human agency and materiality. As we have seen, especially in OC studies, there is a gap in the literature concerning how materiality and sociomateriality are involved in creative processes. STS and, in particular, ANT offer a method for tracing the agency of non-humans and showing how objects participate in the course of action. To understand how non-humans participate in the action course, ANT scholars ask: "Does it make a difference in the course of some other agent's action or not? Is there some trial that allows someone to detect this difference?" (Latour 2005, p. 70). Through ANT analysis-description, it has been possible to map the actions of non-humans participating to networks during the rehearsal and understand how they modify the course of action. In this perspective, I found it particularly useful to use Hennion's concept of mediation (New Sociology of Art), which, as I said, explains how the transformations that characterise the creative process can take place through the relationships between heterogeneous (human and non-human) entities (actants).

CHAPTER 4 The methods

This chapter presents the methods adopted for the research. First, section (4.1) explains the 'how and why' of my research on collective creativity in theatre. The reasons for my use of collaborative ethnography as a qualitative method for the study are explained in section (4.2), whilst sections (4.3) and (4.4) illustrates the materials generated by the research and explains how we navigated toward them. Section (4.5) is attentive to how the practice-based methodological framework helped us to read the empirical materials, and specifies the methodological contribution of distributed cognition-creativity and ANT in this theoretical frame. Finally, (4.6) reflects on ethical considerations relating to this kind of research.

4.1. How it began

When I started working as a director and playwright with "Luna e GNAC" in Bergamo, I had a new workspace and the time and opportunity to reflect upon my work. The theatre company was small and independent, with few but sufficient financial means. It was an excellent chance to experiment as a director and on my practices. Thus, "Luna e GNAC" and my new workmates (Federica and Michele) became my primary field of research. However, making my profession a field of study was not automatic. The prospect arose after leaving my first theatre company, when I decided to take a second master's degree in Clinical Psychology (the first was in theatre) and use this knowledge to investigate theatre creativity and the psychological mechanisms at work in a theatre group. Moreover, the closeness with my wife, who is an academic and my co-author, further fuelled my interest. I met her for the first time at feminist cabaret evenings where my colleagues and I were distributing Berlusconi's sperm. This thing must have hit her a lot.

Laura's twenty-year experience in academia as a scholar of organisation studies, stimulated me to investigate my theatre work further and thus a conversation began about what I was doing. The context shifted somewhat, when we began the research, as Laura had taken up an academic position in Denmark. Given that she did not speak any Danish, she felt her opportunities for empirical cases in Denmark may be limited, myself, and my new theatrical workmates, became one of the main fields of study. From these unforeseen beginnings we began our collaboration, and of necessity, we made it a virtue.

After completing my thesis for the Master of Clinical Psychology in 2017 on the relationship between creativity and theatre, Laura and I decided to follow our intuitions further, by opening a field of study about a new theatrical production by "Luna e GNAC". The project was to create a children's play about the life of Alfonsina Strada, a famous cyclist in the 1920s who was the only woman in history to participate in the Giro d'Italia. Prior to this show, I had already worked with "Luna e GNAC" in five other shows about civic responsibility, gender equality, ecological issues and children's rights. Thus, our small workgroup already had already established its creative practices. For this new show's production, Laura M., a young actors (they are non-binary) who sometimes collaborated with the company, joined the team.

Our tiny research group (Carmen and Laura P.) joined my small theatre group (Carmen, Michele, Federica and Laura M.). We did not have any official meeting to open the research field, as we all already knew each other very well. "Luna e GNAC" knew Laura P., who had already seen all the theatre company performances, and she knew the poetics and the style of the group. Of course, Federica, Michele and Laura M. didn't know precisely what Laura P. was doing, but they still had faith in what she would do. They knew the research was a university project, which made them proud to participate. As for me, they were used to my quirks, so this research was probably read as another one of my oddities. The decision to open this field of study was made informally and was welcomed. For example, the actors never complained about using the video camera in the rehearsal room. It might also be because, in theatre, we often used the video camera as a working tool to review what we had done. They had a very open attitude towards our research. They looked at us with curiosity and were keen to be interviewed several times, occasionally commenting on what it meant to create together. Thus, we had almost no restrictions in the field.

4.2 A collaborative ethnography

The play's production rehearsals ran intermittently from early January until the 25th of May 2017, when the play premiered at Teatro Verdi in Milan. The rehearsals took place at Auditorium Gritti (a theatre of a cultural centre) in Ranica (Bergamo). The most intense period of the production rehearsals - and thus of the ethnography took place between January and February 2017, when the key elements of the play were set up. Moreover, we were both present during previous meetings before the rehearsals, where the group discussed essential details of the production.

We chose to use a collaborative ethnography for several reasons (Lassiter, 2005; Valtonen et al., 2020). First, we wanted to employ a method that made the most of our different positioning: myself as an insider and Laura as an outsider. We concentrated on my theatrical-specific practices (the production rehearsals) and the

production site where they take place, relying on my privileged position of being an expert in the practice, together with a more traditional ethnographical stand played by Laura. These positions allowed us to make the most of the collaborative ethnography by overcoming the accounts collected with the interviews, integrating them with rich empirical accounts, and developing the reflexivity of the research. At the same time, having two different positions prevented the risk of excessive idiosyncrasies, and difficulties in reading and recognising what the company was doing as a theatre group. As Anu Vatonen, Aki-Mauri Huhtinen and Soili Paananen (2020) state, through collaborative ethnography, we were able to place our bodies at the centre of the process and, depending on our positioning, notice some things and not others.

Finally, we adopted a collaborative ethnography because we applied collaborative practice at every stage of the ethnographic process, from fieldwork to producing accounts and back again (Lassiter, 2005). As I will explain better later, living together, our discussions about the fieldwork were continuous and rich with alternative nuances differentiated by our experiences. Collaborative writing then crystallised these conversations, creating a common story. However, our collaborative ethnography was not without challenges. Laura could not be present at the rehearsals sometimes, because she had to teach in Denmark. When Laura was present, I let myself go to the workflow, knowing I would write back everything in my journal later. However, when Laura was not there, I had to manage the research, the show and dealing with everything else; it was challenging.

Sometimes I couldn't do it. For example, occasionally I forgot to turn on the video camera, or recharge it. So, when I did not have the video camera ready, I recorded audio tracks. I took notes that were a little bit for the show and a little bit for research. Federica and Michele laughed a lot when I ran around the theatre and forgot things. The difficulty was that directing work in the rehearsal room required physical participation, and constant attention, because I usually move back and forth to look at the actors from different perspectives while thinking about the possibilities of the scene's development. So, the involvement is total. Therefore, I needed help to take charge of the research, even just its tiny technical aspects. However, I was pleased and felt safe when Laura was present; and fortunately, she was there most of the time.

For her part, Laura had to manage teaching in Denmark and lead an empirical field in Italy. She often had to go back and forth between the two countries. In addition, it was the first time she worked and taught in English after teaching in her mother tongue for 15 years, which meant she was often exhausted. I remember that once she fell asleep in the audience chairs after she turned on the camera. We probably weren't rehearsing a very exciting or interesting scene.

4.3 What the research material generated

During the research, we produced various data: two research diaries; interviews with the participants (including me) conducted by Laura; reports of meetings, emails, and production projects presented to the foundation to raise funds, a number of MSWord documents including various versions of the script, 20 hours of video of the rehearsals; 8 hours of audio recordings of meetings and several photos.

Some of these materials, like reports of meetings, emails, the production projects, documents and preliminary meeting audio recordings, were useful for depicting the context of the case. But others were fundamental, for example, the different project drafts, and the references they contained, were essential to understanding how the type of show we wanted to perform emerged. The second article, shows how a project presented to a foundation contained descriptions of the character of Alfonsina through some literary references - these references served to nourish the idea of the character and the show. Above all, the research diaries and the interviews, served to portray the background of the research. Furthermore, the diaries, together with all the drawings, sketches and drafts of the text, helped us to clear trace through the specific rehearsal days, all of the initial steps of the show's genesis. They enabled us to reconstruct the story through its complex passages of ideas communicated over the phone, preliminary meetings, projects, failed tests, and changes of direction.

The audio and video recordings were extremely useful for reconstructing scenes we wanted to analyse in detail, allowing us to revisit several times to review interactions, dynamics, and above all, the positions of bodies in the creative process. Moreover, we collected video of the theatre play performed at the première in Milan on the 25th of May 2017. Once the scene to be analysed was chosen, comparing the show's video with that of the rehearsals was useful. Here we confronted the final version of the scene (as it was presented in the theatre show) alongside the moments of its creation. We could account for what was developed in the rehearsal, the becoming part of the scene and what was discarded. The photographs of the show served instead to fix the central moments of the finished scene, and were therefore helpful in comparing them with photographs from the rehearsal when the scene was just born and a few following steps after.

As noted above, we found it fascinating to observe the non-verbal materials and the position of the bodies and actions during the creative process leading to the scene. They were revelatory in terms of group creation practices, the interactional level, and the mediations involving the materiality. I will go into this aspect of the methodology with greater specificity in the section on results.

4.4 How we navigated the research material

Thanks to the privileged access, the materials produced from the very first preliminary meetings to the *premier* was enormous, and herein lay the problems. It took a considerable amount of work to figure out how to analyze all this data. We questioned whether we should take account of every creative processes of the show by mapping the macro moves that had led to its final state. Or, we should concentrate on just a few scenes and conduct a micro analysis of them. Ultimately, it was about figuring out which approach to the story would be most effective to convey the idea that rehearsing the show was a collective process.

We watched the videotapes of the rehearsals several times to decide where to start. Reflecting on the elements in the meetings before the theatrical rehearsals, slowly led to important decisions being made for the show, such as choosing to use the overhead projector. As mentioned above, working, but above all, living together, our reflection was constant. We discussed this during daily walks in Copenhagen's Christiania neighbourhood, and at lunch, dinner or as soon as we got up in the morning. So, with a large amount of data, and the symbiosis between us and the theatre group, it was essential to set boundaries to begin to tell a story.

What we were not looking for was a generic description. We wanted detail, and to delve into technicalities when describing artistic facts. At the same time, we were conscious of departing from the narratives that describe the theatre as the work of (usually individual and male) inspiration, and instead analyse the work practices in their technique, composition, craft and artistry. We realised that this kind of analysis could be made for every show fragment, so we started from the first day of rehearsals and compared it to the final play performed. We noticed how the first day generated the embryo of one of the play's first scenes. When looking at them in fine details we were surprised by the correspondence between the rehearsals and the finished scene. In fact, not every rehearsal day produced scenes that would later be part of the show. Therefore, we looked for evidence throughout the material, to see if they had traceable correspondences with the finished scenes.

We found many scenes that we could trace back. In the company's jargon, these were "happy" scenes because they quickly found their form of expression, and did not require much subsequent reworking. Therefore, we decided to focus on the rehearsal material connected to these scenes as a micro-analysis. Later I realised that we can consider these scenes, like events, as "moments" when creativity emerged, in a similar way that Fortwengel et al., (2017) theorised a strong view of the process. As they underlined: "a creative event can never be recognized as such as it happens; it can only be recognized as creative over time, through its effects on other events, or more broadly how it relates to preceding and subsequent events" (Fortwengel et al., 2017, p. 14). However, I realise now, that at the same time these moments are also part of the flow of practice, and cannot exist except within the practice. Ultimately,

we chose to focus one of the initial "happy scenes" of the first day of rehearsals, where the correspondence between the rehearsals and the finished scene seemed easier to trace. This is because we thought that analyzing a scene with an "easy" match, would make it easier to do a micro-analysis of the composition processes as a first step of the research. By choosing to analyze a scene with a simple correspondence between the raw material and its outcome, we were able to find the theoretical tools to read it. As this type of analysis in theatre is new, the first task was to understand the fundamental processes underpinning the transformation from the raw material to the scene. This was akin to reading a text in an unknown language and understanding its alphabet and syntax. Therefore, it was necessary to work on a simple fragment before reading the text (the whole process) in its entirety. Moreover, this allowed us to look at the small fragment through different theoretical lenses and thus understand the relationship between these lenses in reading the phenomenon of OC. The stratification of our theoretical readings on the same fragment led to a model that can interpret OC more complexly. Furthermore, we considered the small fragment concerning other elements which emerged from the ethnography (e.g., the poetic of the company, the choice of the overhead projector, and its positioning in the community of practice). Therefore, this move made the little fragment of rehearsals representative of other fragments for reading the distributed creativity process.

The idea was that the chosen scene was not indicative because of its specificity, but for its analytical potential to demonstrate the effectiveness of the practical lens for the study of collective creativity.

The scene

In the scene, Alfonsina, played by Laura M., is chatting with her mother, played by Michele, about her future. The scene depicts the featured characters (Alfonsina and her mother) and shows the nature of their relationship. According to gendered expectations for women typical of the time, the mother wants Alfonsina to become a good embroiderer (one of the jobs available for women at the time) and to marry. However, Alfonsina wants something entirely different in her life and is very bored by her mother's requests. This scene is a dialogue between the two characters. It is composed of a first part played behind a screen which shows the actors as shadows (see Figure 1), and a second part acted in front of the screen with the two actors embroidering together while chatting (see Figure 2). The first part is a shadow play behind a large screen that occupies the whole scenic space. Through this play of shadows, the mother appears very big compared to the much smaller and younger Alfonsina (Figure 1).



Figure 1. The first part of the scene. Photo curtesy of Domenico Semeraro.

In the second part of the scene, the two actors stand next to the big screen, where the mother asks Alfonsina to embroider with her, and Alfonsina dutifully agrees. The mother admires Alfonsina's ability to embroider. She looks at the embroidery image shown through a projection on the screen (Figure 2) and declares her unhappiness at being unable to read what Alfonsina has written in her needlework. Images are shown of Alfonsina's embroidered writing which states, "I cannot take it anymore", "help" and "save me". These are vital participants in the scene where the contrast between the dialogue and the projected images (with its text) adds irony.



Figure 2. The second part of the scene. Photo curtesy of Enzo Mologni.

4.5 How we analysed the research material: a practice-based creativity study

To analyse the practice that constituted the processes of the show's creation, we drew on Gherardi (2019) and Nicolini (2012) use of method packages; zooming in on the details of the accomplishment of the practice. We considered the saying and doing of the participants, reconstructed the interactional order of the conversation and negotiation and how they temporally organised the actions. As Nicolini recommends, we considered how practice is accomplished through the body and discursive practice. We saw, for example, how Michele's and Laura's movements contributed to creating the scene and configured the creative practice and how the interactions allowed the group to construct something together. Furthermore, we were critically attentive to the non-human entities in the action scenes, like the overhead projector or the images from Jacky Fleming's book (2016) used as references. Finally, we considered the artefacts used in the practice and how they contributed to shaping the scene. Before delving into these two aspects, some methodological clarification about 'zooming in' and 'zooming out', would be helpful.

Whilst zooming-in consists of studying how the activity is accomplished in one site, zooming-out corresponds to tracing the relationships between other practices connected to what practice a scholar is studying. Zooming-out allows the researcher to discover other practices before the movement of zooming-in again with enhanced

knowledge, in order to get a better understanding of the practice. The movement of zooming in/out is best considered as rhizomatic. Zooming-out connects the interactions already grasped with the ethnographic observations, to other elements of the practice that are not happening in the here and now. Moreover, it connects the practice under investigation with what Nicolini calls the "wider picture".

When zooming-out, we collected data about the composition of the group of practitioners (Carmen, Michele e Federica as experts vs Laura M. as newcomer), the "usual" way of working of the group staging new plays (with improvisation and a provisional draft in the rehearsals room), the theatrical techniques most used that mixed the known, with the unexplored projection of drawings, shadows and images (real-time drawing), etc. Despite being focused on the production rehearsals as the primary practice where the play was composed and staged, we also contextualised this practice in the entire process of development of the play (from the preliminary meetings, the historical materials on Alfonsina Morini Strada, other materials used as references, the writing of the application for funding, the composition of the preliminary draft, etc.). We called these the group's staging practices.

Zooming in, we went into more detail about the work within the rehearsal room, focusing on all actor, directing and set design micro-practices that contribute to the creation of the scenes. Hence, we called them rehearsal practices.

The collective side of practice-based creativity

Practice-based creativity is focused on the emergence of novelty in social practice; therefore we paid special attention to the collective dimension of creativity. This highlighted how the emergence of novelty is anchored in situated occurrences in the work practices. To explore further, we focused on two hours of video recording on the first day of rehearsals. We analysed the conversations, the movement of the bodies and the interactions between participants. Following Sawyer & DeZutter's (2009) suggestion to study collective creativity, we began by analysing the video through an interactional analysis' inspired methodology.

As pointed out by Jordan and Henderson (1995), interactional analysis is an interdisciplinary method for examining the interactions of people with each other and objects in their environment. At the core of interactional analysis, is to use video recordings of naturally occurring collective activities. Analysing the interactions of the video recording revealed the traces of the principal human contributions that were mobilised, or made, during the rehearsals. We observed the order of interaction between my interventions and those of Michele and Federica, which uncovered how the creative idea emerged from a kind of triangulation of our interventions. An idea launched by one person was subsequently picked up and amplified by others in various ways. For example, when Michele collects my suggestion of choreography on the theme of embroidery (Alfonsina was also a seamstress), and expands the gesture.

The salient passages that relate to this interaction will be explored in greater detail in the next section.

Whilst the practice-based analysis focuses on interactions, it is still within the frame of distributed cognition; it is more evident because reading these interactions is targeted to notice some aspects like coordination, negotiations or attunements. Coordination illustrates how the group experienced a shared cognition in the creative process, through which members adapted and coordinated their actions to contribute toward the creative output. Negotiation shows how this creative output is discussed in a shared collective conversation. Attunement consists of moments in which bodies with their sense and cognition connect and affect other bodies and movements, like mirroring gestures between the participants. Through the eye of distributed cognition, these can be explained more as the unfolding of collective cognitive capacities, than as properties based on recurrences. This approach - recognised by contemporary creative studies - focuses a little more than other approaches in PBS on the extemporaneousness and specificity of the creative event. However, even when using interaction analysis, a collective dimension of the creation of the novelty started to be clear. But in order to better account for the role of materiality in the emergence of novelty, we had to mobilise a different literature. In this regard, we mainly referred to Actor-Network Theory (ANT).

The material side of practice-based creativity

To account for the role of material in practice-based creativity, we collected several materials. For example, we have noted how the theatre project was written for a Grants Foundation, how its references were nourished by the idea of the type of character we wanted to represent in the show. Similarly, we observed how the first provisional draft of the script was different from the final scenes, and how each reworking of the script was a step toward the final result. In addition, we observed that the reconstruction of the email exchange allowed us to reconstruct the first confused steps in the show's production.

Once we had identified the practice, and the fragment of the creative process that we wanted to delve deeper into, it was necessary to trace the network of human and non-human entities that were part of it. In other words, we needed to find out how, and which, network associations lead to the creative emergence. When we traced the network, we noticed how it was composed not only of humans (Laura M., Federica Michele e Carmen), but also of non-humans: the empty rehearsal space; some sheets with draft script; and some references as drawn images. Above all, we saw how artifacts, such as the screen and the overhead projector, acted within the shared imagination of the professionals and impacted the creation of the scene. These artifacts, even when not present, operated by making the participants execute unexpected and unforeseen actions. For example, as we will see in the next chapter, the overhead projector action turned the characters

into shadows and transformed a scene from one belonging to an actor, into one orchestrated by shadows.

Once we identified the network, and the relevant encounters between the actants, we tried to understand which elements acted as either mediators or intermediaries. We were able to see how some encounters brought changes to what was planned intentionally by the group, while others didn't. For example, the part of Alfonsina's mother was initially meant to be played by Federica, however, the desire to unhinge the correspondence between gender and character, led the group to experiment with something new. So, Michele played the part in place of Federica. The encounter between his male body and the character's femininity created new, unexpected and ironic effects, which enriched the show. Latour calls this change a translation, which he describes as, "a relation that does not transport causality but induces two mediators into coexisting" (Latour, 2005, p. 110). Therefore, while some elements worked as intermediaries, transporting a force that would otherwise remain the same, others operated as a translation. For example, some parts of the draft text that remained unchanged from when the playwright wrote them, acted as intermediaries, transporting the meaning in the playwright's thoughts.

4.6 Reflections on ethics

Before concluding the methodology chapter, I want to reflect on the place of ethics in my research. As Anna Kirkebæk Johansson Gosovic (2019) points out, ethics are an essential parameter when evaluating the quality of qualitative research. However, qualitative research does not have a well-established framework for assessing its quality. As highlighted by Eriksson and Kovalainen 2015, using universal criteria to evaluate qualitative research should be avoided. Instead, each research project and publication should be evaluated and assessed from its own position (Eriksson & Kovalainen 2015, p. 309). Gosovic proposes a framework drawn from her own experiences as an organisational ethnographer, consisting of five critical questions that a researcher must ask herself to before exploring the reciprocal relationships she inevitably enters into when conducting ethnographic research. I answer these five questions in a bid to situate my work in an appropriate ethical frame.

The first question Gosovic proposes is: how am I entangled in my research field? For Gosovic, the first aspect to understand is how the organisational ethnographer is entangled with her field. My previous comments have fully explained the time and depth of my entanglement with the field - my first job was in theatre, and the people I worked with for several years composed my job community. Therefore, access to the field was straightforward for me. It was optional to have a formal agreement with the theatre company to start the research. My deep entanglement and embeddedness with the field was a distinctly positive aspect that allowed me to quickly set up the

research. To further illustrate, in 2017 I was not yet involved in a PhD, and I had no official guidance to follow with any university. As a researcher from SDU, Laura has to comply with GDPR and ethical research requirements. Nevertheless, as Denmark ratified the UE GDPR regulation only in 2018, at the time of our fieldwork, she was not obliged to officially open a research field with her university's legal office. There were no financial issues nor conflicts of interest, and I was not paid for the academic research. I earned money only from my job as a theatre director. Therefore, my entanglement was visible, but my financial dependency on the field had no bearing on the research.

Gosovic's second asks, with whom am I entangled? This question has a dual regard. On the one hand, it concerns the formal and informal written agreements, or legal documents, that tie the researcher to the field, whilst on the other, it involves those they are entangled with in the field. Gosovic particularly points out, that if field access is obtained by friendship or unofficial channels, the researcher could feel the obligation to return the favour of access to the field.

My informal entry into the field often made me feel obligated to explain to the actors what Laura and I were doing, and to try and share part of our reflection with them. These efforts impacted our research when the actors became aware that we were working on the concept of distributed creativity; arguably this could have impacted their usual performance, making them more open to collaboration than usual. However, this had little impact on the research outputs, because our study focused on the first day of rehearsals when our purpose was still unclear to the actors. Concentrating on the initial part of the rehearsals captured the very fresh start of our collaboration. My intense entanglement with the theatre company could have impacted my critical view of the field, but being a research team of two protected us against that risk.

The third question relates to the nature of gifts a researcher receives from the fields that she/he studies in terms of both tangible and intangible things. According to Gosovic, all the gestures, helping hands, and opened doors offered during fieldwork can be considered gifts. No tangible gift were received from the field, nor any 'special gesture' to facilitate the research. I always set up, turned on and off the camera by myself when Laura was not there, and I organised myself to make recordings in different ways when the camera was unavailable.

I did, however, receive a collective, open interest, that was shared by the actors in reflecting on collective creativity: a shared understanding that made the research climate more comfortable. Therefore, to answer the question posed by Gosovic about reciprocity, my approach was to report precisely how each actor participated in the collective creation of the show. This was not easy. I quickly realised that my relationship with them could have a tangible impact on how I portrayed them and myself. For this reason, I tried to describe in detail only what they did during the scene construction. I was helped in this task by the fact that we considered just a

small fragment of the rehearsals. If I had tried to summarise their entire creative contribute to the process of completing the show, it would have been more markedly more difficult.

To consider Gosovic' final question about what happens after the fieldwork, I can only say that I continued to happily work with the "Luna and GNAC" theatre company. The research process, and the resultant publications, made no noticeable change to my relationship with my job community, and although the actors knew we published articles and were happy about it, they never asked to see them. The fact that the papers were academic, and written in English (few middle-aged Italians can read in English) certainly discouraged them from reading. Whilst not translating these articles for them, we occasionally tried to explain what we wrote.

Finally, I have sought to follow Ingo Winkler's advice (2018), by asking to what extent my personal story permitted the readers, and myself, to understand the collective creative process of composing a theatrical play. This has enabled me to arrive at a genuine and frank narrative geared to understanding the situated experience of collectively staging a show. The possibility of sharing the research with my co-author made this journey more prosperous. The constant dialogue with Laura was essential for developing an original view of my creative work. Our co-researching and co-writing are a further example of meaningful collective creativity.

CHAPTER 5

The results: a new way of considering organisational creativity

As the introduction makes clear, this thesis contributes to the scholarship on processual organisational creativity by using a practice-based lens to grasp ongoing processual collective creativity, while also considering the role of materiality in the creative process. For this purpose, the work has been underpinned by embracing an epistemology of practice on organisational creativity. In chapter two, it was outlined how this lens was augmented with theoretical insight and methodological techniques linked to distributed cognition/creativity and ANT. These theoretical models which explain/describe the creative process, are evinced through the three articles that comprise part of this dissertation, and which analyse a fragment of theatrical rehearsals in the production of a new play. The articles serve to unify these theoretical perspectives and propose a coherent proposal on organizational creativity. This is achieved by revisiting the concept of creativity as problem solving, and interpreting it as a method of composition where relationships are tested, and chains of mediations generate innovative outcomes. This chapter's first three sections present an extended abstract of the three articles (5.1-5.2-5.3). The final section (5.4) answers the research questions, explaining how our research enlightens different aspects of creative doing and the transformations occurring in the creative process.

5.1 Summary of the articles

5.1.1 First article: "A dynamic view of organizing: an integrative approach"

The first published contribution that comprises this thesis is a book chapter with Laura Lucia Parolin for a collection titled "Organizational Cognition. The Theory of Social Organizing", edited by Davide Secchi, Rasmus Gahrn-Andersen and Steven John Cowley (2022). This contribution is mainly addressed to MOS and is also relevant to Organisational Creativity. The chapter proposes an integrative approach that considers insights from distributed cognition and practice-based studies, to contribute to theorising of the meso-domain of 'organisational cognition'. The integrative approach mixes lessons from distributed cognition that focus on analysing complex, socially distributed cognitive activities, with practice-based studies that underline the social role of practice and its recurrent actions in the tradition of situated learning.

After a brief introduction, the chapter considers the potential convergence between two authors that are rarely considered together in MOS, because they work in distinctive disciplines and contribute to different scholarship streams: Edwin Hutchins and Jane Lave. We underline how their consideration of the relationship between cognition and practices shows a degree of analytical convergence. In the third section, we propose a panoramic toward the recent debate on ecological cognition. As in this "ecological" stream of research, we underline that cognition is not only "extended" beyond an individual's skin and skull but is contingent on, and supported by, a particular community's tools, institutions, and normative practices. The following section is attentive to the perspective of situated learning proposed by Lave and Wenger (1991), where knowledge is considered less as information, and more as a process of knowing that emerges from participation in a situated activity within a community of practice. We connect this tradition of knowing in practice, bounded by the concept of community of practice, with "practice-based studies" or "studies of knowing in practice".

Section five presents our case study with a brief outline of the research methods employed. The sixth is dedicated to a detailed analysis of the empirical case, applying tools from distributed cognition (Hutchins, 1995; Clark & Chalmers, 1998; Vallée-Tourangeau and Cowley, 2013) and offering an analysis of the practices involved (Nicolini, 2012; Gherardi, 2019). I do not reiterate the case that has been extensively exposed in the discussion of overall methodological above, rather, I will summarise the key analytical passages.

The first section focuses on the question of coordination. It is concerned with how the change of the director's position, her leaving the group sitting in a circle on the stage reading the text, generates a consequent movement of part of the group and a subsequent change in the quality of the rehearsals. Analysing the interactions using a distributed cognition framework, we can show how the group shared a cognitive perception of a situation that is orientated toward the composition of the scene, and how Carmen, Laura M., and Federica mutually coordinate their actions "on the fly" toward the shared goal of staging the scene. Using a practice-based lens, we were able to see that the group had learned to frame situations that are meaningful to the practice, and use them to orientate (and reorientate) the actions.

The second section considers the rehearsals of Michele presenting the mother's character with a monologue suggested by the script. Michele feels he must address his reading and gaze toward Alfonsina's character, who is not in the scene. With his body movement, he turns toward an imaginary Alfonsina onstage, and considers the options for positioning Alfonsina on stage. While the distributed cognition lens shows how the idea of using shadows emerges from Michele and Carmen's interactions in the cognitive system, the practice-based lens adds greater analytical understanding to the creative use of shadows in group practices and poetry. Moreover, this section explains that Laura M. not participating as actively in the definition of the scene depends on the newcomer's socialisation process and participation.

The third section concentrates on the concept of attunement with reference to an example involving Michele and Carmen. Cognition is distributed between Carmen and Michele through Michele's action of 'mirroring' Carmen. 'Attunement' here, also underlines the crucial role of bodies in ecological cognition. Unlike distributed cognition, the concept of attunement used by practice studies, is strongly related to the prominence of the sense - central aspects in understanding how knowledge and learning take place.

The fourth section focuses on the inclusion of cartoon drawings taken from a comic book by Jacky Fleming (2016), were projected on the screen. Here, the article explores the collective imagination that led to this action, and how it was based on a shared representation of information from the situated network of interactions, while relying on the participants' professional theatrical vision (Goodwin 2015). While distributed cognition is able to distil how this capacity corresponds to the group's ability to visualise the juxtaposition of the elements constituting the scene, the practice-based lens draws out aspects of the practice in which shared cognition is deeply rooted.

The fifth section develops ideas around the role of improvisation, in particular, the importance of the short moment in which Federica acts in the mother's character and improvises new text lines. This example shows how creative output can suddenly emerge, seemingly from nowhere, but derived from the cumulative knowledge from the previous steps. Here, the practice lens also shows that 'knowing' how to work on an emergent meaning, is rooted in the specifically theatrical professional knowledge of making improvisation.

The chapter concludes by proposing an integrative approach that considers insights into distributed cognition and practical studies. We emphasise how both approaches share an interest in professional knowledge mobilised within the ecology of interactions, and they both focus on the dimensions of collective work. At the same time, we note differences. For example, while the lesson learnt from distributed cognition deals with analysing socially distributed complex cognitive activities, practice studies, in the tradition of social learning, emphasised the social role of recurrent actions. Our theoretical proposal converges these two traditions through an integrative lens. Thanks to this, it is possible to better understand the emergence of creative innovation in the dynamics of interactions between professional members of an organised group (a theatre company). It is also possible to enter creative emergencies by analysing organisational phenomena such as collective coordination, competent performance, tuning, visualisation and improvisation.

5.1.2 Second article: "Unpacking distributed creativity: Analysing sociomaterial practices in theatre artwork"

The second article was published in the academic journal "Culture & Psychology" in 2020. The article explicitly addresses Creativity Studies, but promotes a novel way of

considering creativity by accounting for the useful role of artefacts' in Organisational Creativity. After a brief introduction, the paper explores current theoretical approaches to creative action, stressing the need to conceptualise the material and collective foundations to distributed creativity. Glăveanu's conceptualisation of distributed creativity (Glăveanu 2010, 2014), is explored, whilst illustrating Tanggaard's focus on creativity in everyday sociomaterial practices (Tanggaard 2013). Finally, it introduces Farías and Wilkie's proposal, to investigate the actual sites where practitioners engage in conceiving, modelling, testing and developing cultural artifacts (Farías & Wilkie 2016). Finally, to unpack the collective and material dimension of distributed creativity, the article suggests focusing on sites and practices related to the emergence of a new cultural artefact (a new play).

After elaborating on the empirical research and methods used, the article explains that staging a new theatrical show is a case of distributed creativity in artwork. To analyse distributed creativity in artwork creation, we considered the artwork's multiple materialisations during its development. We sustain the argument that the new piece of theatre emerges from multiple materialisations like descriptions of the idea, story outlines, drafts of the script, images, bodies and artifacts. If we want to consider the sociomaterial grounding of creative action, then we need to regard these intermediaries as steps in the process of developing artwork.

The following shows how the projects description of the show for a grant application was relevant to the show's creation. The text of the application not only defined the preliminary plot of the drama, but also offered intense images that embodied Alfonsina's character within the social and cultural environment atmosphere of the time, by using quotations from different bibliographical references. The text of the application mobilised specific qualities of the creative idea in its embryology, whilst the quotations taken from other sources about the story's protagonist, 'feed' both the features of the drama's main character, as well as the very meaning of the emergent theatrical work.

Before going into the activities that took place in the rehearsal room, the article analysed the dispositions for the new play, such as techniques that were used, the cast, and the script's first draft. These elements are considered in terms of their materiality that will allow or prevent specific actions. For example, the bright blackboard (overhead projector), coupled with the projection screen, is a theatre technique that permits multiple ways to present characters onstage, such as extemporary drawing, illustrations, photos and shadows. However, whilst allowing for numerous possibilities, the blackboard's and projection screen's materiality onstage prescribes how the actors' bodies can use space.

The article then analyses the fragment accounting for the rehearsal of staging the scene with Alfonsina with her mother. When the rehearsal began, the playwright's provisional draft does not prescribe the characters' positions and movements. The composition of the scene, including the characters' movements, became defined

during the rehearsal and only then was it inscribed in the script. The article considers the different actions in the rehearsal room. The first is Michele turning toward an imaginary Alfonsina when he is performing the mother's monologue. This turning leads the group to resonate with different possibilities of staging Alfonsina as a drawing or a shadow. As a consequence of the relationship between the light blackboard, the projection screen and actors' bodies, several variations on the presence of the characters on stage are considered as possible (actors' bodies physically onstage, voiceover, drawings projected on the projection screen and shadows).

The second action the article considers, consists of Carmen's suggestion of using the images from the Fleming's book as references to 'feed' the meaning of the scene. The juxtaposition of the mother's speech, and the ironic images of the embroideries, inspire the group's capacity to collectively imagine the effect of projecting Fleming's drawing (embroideries) onstage, is underlined as a professional vision which redraws the very meaning of the scene.

The third action under analysis was the group's ability to improvise around the newly emerging meaning of the scene. Federica, stepping into the scene, introduces new lines that emphasise the contrast between the mother's speech and the embroidery images. Federica's text is a creative improvisation based on situated collective meaning-making that resulted from the sociomaterial aspect of the rehearsal practice.

The conclusion underlines how the distributed nature of creativity was revealed by following the emergence of a new scene. Observing professional practices through the lens of laboratory studies, we were able to distil the materialisations that participated in developing the creative idea. We term these materialisations as 'intermediaries', claiming that distributed creativity occurs between them (descriptions of the creative idea, drafts of the script, sketches, images and quotations). We consider the rehearsal room as a 'creative laboratory', the locus where the potential of texts, material artifacts, bodies, concepts and meanings are tested and explored in the creative process. Furthermore, we emphasise how meaning-making is collectively and discursively constructed in the rehearsal room. We claim that studying distributed creativity, necessitates the empirical observation of the moment-to-moment processes whereby situated actions and interactions result in the emergence of a new piece of art.

5.1.3 Third article: "Post-anthropocentric Rehearsal Studies. A conceptual framework to account for the social and material mediations in performance-making"

The third article, also co-written with Laura Lucia Parolin, is published in the journal "Studies in Theatre and Performance", and whist it is specifically addressed to Theatre Studies, it still has a resonance with Organisational Creativity. It further develops the concepts and ideas explored in the previous article in showing how the

sociomateriality of the rehearsal is an essential part of the theatre-making process, through giving materials, bodies, and matters in the rehearsal room a crucial role in developing and refining a scene. In this respect, the concept of 'mediation', drawn from the New Sociology of Art (NSA) and Actor-Network Theory (ANT), are employed to critically explore the performance-making that can be traced in the networks of mediations (human and non-human) involved in the process of creation. The introduction sets out how recent interest in theatre-making in a strand of literature called Rehearsal Studies has raised questions about artisanal processes in performance-making practices, and elicited a deeper interest in situated performance-making practices (McAuley 2008; 2012). Rehearsal Studies advocate ethnographic methodologies to the study of production-making practices. We suggest that exploring theatrical performance-making, the study of rehearsals requires not only the inclusion of human participants in the rehearsal room, but also the agency of non-humans such as those of, artefacts and spaces. To shed light on performance-making practices, we propose looking at a strand of literature within the sociology of art that is analytically tuned to consider material agency (Latour 2005). By drawing on the concept of 'mediation' (Hennion 1997, 2015), as used by the NSA, we empirically illustrate the material and social network of relations that give rise to performance-making.

The first section considers the extant research that has emerged from Rehearsal Studies. In particular, we explore the work of Gay McAuley, who shows the relevance of this scholarship for theatre-making studies. We underline that Rehearsal Studies need to pay more attention to bodies, matters, and non-human entities that participate in its creative acts. By adopting conceptual ideas from the NSA, meaningful consideration of the interaction in rehearsals can be realised by framing questions about the aesthetic properties of art under social constructivism. The potential of connections with the NSA are critically explored in the second section.

The third section explores how Antoine Hennion's concept of mediation provides a useful analytical tool for studying performance-making. Taking inspiration from Latour's work on Science and Technology Studies (STS), Hennion identifies the concept of 'mediation' as central to investigating the networks within which cultural products emerge, confronting the issue of the artistic/cultural object, in the same way that STS perceived the scientific object. The concept of mediation helps to qualify and describe the agency of non-humans. It provides an answer to one of the central questions about the potentiality of the object, which is where the object takes the power of action from. Hennion underlines that the art object itself has power, because it is an active entity, made so by the chain of mediations of which it is part.

The following section illustrates our empirical case (which is the same as that presented in the other articles), the research methods we employed and explores the

ethnographic material we gathered from the rehearsal. The fifth section analyses the data to illustrate the relevance of matters within the chain of mediations from which the artwork emerges. It takes account of one of the initial scenes of the performance, where the protagonist Alfonsina, played by Laura M., is chatting with her mother, played by Michele, about her future.

After a detailed description of the scene, the analysis draws out how the scene was composed in the rehearsals through the mediation of the human and non-human participants: the draft of the text, the contribution of the overhead projector technique, the actors' bodies, the images, the actions and improvisation. The first mediation taken into account are the encounters between the imagined characters and the actors' bodies. These encounters generate a series of new possibilities. For example, the choice of Michele to play the role of the mother, entailed a renegotiation between a normative binary vision of gender attribution toward a more fluid one. Similarly, as a non-binary performer in the role of young Alfonsina, Laura M., creates a female-identifying character that is not stereotypically feminine. The second mediation is the relation between actors and spaces. The encounter between text on the one hand, and the bodies in space on the other, allows for the testing and trailing of further elements in the scene's composition. The third is the role played by the artifacts. The overhead projector (OHP), the white projection screen, the stage space, and the actors' bodies contribute to performance-making, transforming and modifying the scene and the meanings they were initially supposed to carry. Through these artifacts, the first part of the dialogue between Alfonsina and her mother becomes a scene made with shadows. Unlike actors' bodies, a character as shadows can easily increase or decrease their size, or even mutate their proportions. These potentialities grant greater creative exploration of the relationship(s) between characters by using different on-screen sizes of shadows. The improvisation of Federica constitutes the fourth mediation. As the fragment shows, although she is not cast in this role, Federica temporarily assumes the character of the mother's 's identity to improvise new text. Federica acts as a mediator adding new lines to the scene and ironically transforming the scene's meaning.

In conclusion, we summarized the contribution of our proposal to Rehearsal Studies. We underline that if Rehearsals Studies is to take a fuller, more nuanced, account of performance-making, it must embrace posthuman ethnographic research, and consider both the social and material interactions in the rehearsal room. To assess the material interactions involved in performance making, we suggest using the concept of mediation. In sum, we claim that tracing the chain of mediations, and their transformations, allows Rehearsal Studies to unfold their potential to consider what is really happening during performance creation.

5.2 Answering research questions

This combination of wider analysis, published articles, and the establishment of analytical connection within, shows how the epistemology of practice can be a precious theoretical tool for reconfiguring organizational creativity in practice, by offering a way to take account of its processual dimension. The following, shows how the above, individually and collectively, provide a thorough and defensible set of answers to the research questions set out in the introduction.

In consideration of the first RQ (How to extend an understanding of processual practice-based OC?), this study confirms that the epistemology of practice is a beneficial tool. It is able to see processual OC as a complex and multifaceted phenomenon where the dimension of knowledge, power, performance and sociomateriality intersect in practice, stimulating and producing the creative emergence. Considering all these dimensions together provides a multifaceted account of processual practice based OC. This means not only seeing the processual, knowing and collective aspect of OC, but also its sociomaterial dimension, namely that processual OC is a phenomenon equally participated in by humans and non-humans.

In our case, the epistemology of practice shows how organisational creativity emerges from particular work practices related to staging a new show. This awareness impels us to consider creativity, not as a spontaneous insight into the participants' minds, but as a collective accomplishment that mobilises shared professional knowledge and power. In this sense, it shows how processual organisational creativity is grounded in several dimensions of creative work practices. To grasp the dimensions in the composing of the practices, they must be analysed at different levels; this is underscored by the highlighting of different dimensions that compose the practices, by using zoom-out and zoom-in movements (Nicolini 2012).

By zooming out, all the staging practices connected to the style of shows usually produced by the theatre company can be seen. For example, practices such as: *staging independent children's shows, staging shows with drawings, staging shows without a predetermined text,* and *staging shows that mix scenic languages.* All these practices characterise how the theatre company "Luna e GNAC" crafts theatre. They mainly produce independent shows for children, and usually writes and develop projects in which a show's initial idea was presented to obtain grants from foundations. We showed how, in turn, these applications feed the initial design. Moreover, we observed that the staging style of the theatre company, embodies a theatrical language that mixes text, images, actor's movements and artefacts. In this way, we were able to unpick how the group developed a way of working, where the creation of the show emerges from the rehearsal room, where scenes are improvised, imagined, tested and finally crafted.

Zooming in, we noticed how the micro-practices of the rehearsals involved smaller units of activity which are denoted by different authors in various ways (see

Nicolini & Monteiro 2017). For example, *characterising personages* and *proposing actions in the space* (Laura M. and Michele), *suggesting new lines of text* (Michele and Federica), and *supporting others' initiatives* such as presenting pieces of music (Federica). These practices are common to many other theatre companies. However, the "Luna e GNAC"'s rehearsal micro-practices have a second level of complexity in creativity, because "Luna e GNAC" professionals construct both the text *and* the staging in the rehearsal room. "Luna e GNAC"'s rehearsal practices consist of an open process of testing and retesting in the rehearsal room, with very few elements fixed from the beginning. This makes this case particularly interesting for practice-based processual OC.

For example, staging shows without a predetermined text, implies that the actors' will collaborate, negotiate, and cooperate in the development of the storytelling. The actors' improvisations, by definition, create part of the text and the story (see Federica's contribution). Staging theatrical shows with drawings, and mixing different languages, means that the attempts and tests of the composition of the scene, combining drawings, bodies, materials, cartoons, and music, are collectively made in the rehearsal room. This is where the juxtapositions of humans and nonhumans are tested and produce new developments, as can be seen in the shadow scene or Fleming's drawings.

Following the epistemology of practice, we observed how these staging and rehearsal practices unfold in different dimensions of processual organisational creativity.

- The knowledge dimension in the collective organisational creativity process. This dimension implies historical, practical and tacit professionals' knowledge, including sensible knowledge, namely the capacity to attune and feel, affecting each other. For example, it concerns the director's capacity to conduct the process, the ability of the actors to move in space, and their capacity to characterise and improvise. Moreover, Michele and Carmen's ability to attune is an example of their sensitive and affective knowledge in practice, like Federica's ability to place a piece of music at the right moment, Laura M.'s capacity to change position when Carmen moves, or the ability of all the participants to imagine possible scenarios together.
- The power and positioning dimension embedded in the collective organizational creativity process. This dimension describes how the differences between the participants' agency depends on their positioning in the group (community of practice). For example, in our case the differences between a newcomer (Laura M.) and established members (Federica, Michele and Carmen). As newcomer, Laura M., did not feel comfortable intervening in the process, while Federica, a veteran, felt entitled to intervene as much as she wanted. Other differences in terms of power can be related to the organizational roles in the process. For example, Carmen

as a director, potentially has more power to decide the work's direction than the actors. Therefore, the practice-based lens shows how participation in organizational creativity depends not only on personal characteristics or motivation (Amabile, 1986), but on the position of the participants in the social formation behind the practice (i.e. community of practice).

- The dimension related to sociomateriality, i.e. how agency is distributed in the collective organisational creativity process and what happens in the encounters. The rehearsal room tests relationships and encounters between distributed human and non-human entities, with each encounter reconfiguring the entities, the mediations and thus the direction(s) of the collective creation. Here, the processes that regulate the encounters between humans, such as the coordination of Carmen, Laura M., and Federica, Carmen and Michele's attunement, the collective visualisation or Federica's improvisation (this dimension can be further explored by distributed cognition). Moreover, it includes how the encounters both between humans and non-humans operate. For example, working with non-humans means understanding which ones acted as mediators by transforming the process of creation. As we have shown, the overhead projector and the screen played a crucial role in creating the scene, as did Jacky Fleming's drawings, the loose provisional draft text, or the references in the show's project description. (ANT and the New Sociology of Art can further explore this dimension). Moreover, from the PBS perspective, each encounter is historically stratified based on previous encounters.

- The dimension related to a common orientation toward the object of practice in the collective organizational creativity process. The theatre professionals participating in the practice all shared the same concern about 'staging a new show' (and new scenes). In PBS, this is called the 'object of practice' (Gherardi, 2019) and corresponds to the goal that a particular practice wants to achieve. We highlighted how during the rehearsals staging practice, the participants shared a common orientation toward the scene's construction, understanding where to go together at each step. For example, the final laughter of the group after Federica's improvisation demonstrates how the group recognizes the scene as "working", and indicates that it has a high probability of being inserted into the show and compelling a direction on the process and subsequent scenes. The commonly negotiated orientation guides and orients the chain of practices involved in the creative process.

In figure 3, I am proposing a visualization of these multiple dimensions and how they are connected to the epistemology of practice. The figure shows how distributed cognition and ANT helped to reveal the situated dimension of creative practices, by offering tools that read the dimension of human (distributed cognition) and non-human (ANT) encounters in creative practice. Furthermore, being able to interpret

how agency is distributed between humans and non-humans, helps us to reconstruct the creative emergence process.

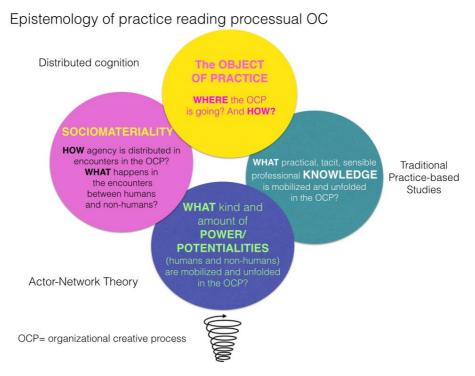


Figure 3. The epistemology of practice reading of the processual OC. My elaboration.

The graphic should be interpreted as beginning from the dimensions of knowledge and power, that unfold their potentialities in the dimension of the encounters where creative novelty emerges, and where the contents and directions are continuously negotiated. I propose interpreting creative practices through the lens of processual OC, as a chain of these dimensions that continues until a shared stabilization is reached. The figure should therefore be read as an ascending spiral, where each partial stabilization of an encounter follows a subsequent negotiation, and consequently, brings knowledge and power into play towards a new round of encounters. Therefore, the processual progress of the OC lies in the continuous succession, play and overlapping of these dimensions. It is interesting to note that this figure could be applied for reading both macro organizational, creative phenomena and small-scale phenomena, making visible the role of all human and non-human participants in the creative process and the different phases it passes through.

5.2.1 About distributed cognition/creativity

To address the second research question (How does distributed cognition deepen our understanding of constructing creativity in situational interaction as part of the practices of OC?), we have shown how distributed cognition enriches the epistemology of practice lens on processual organisational creativity, by offering a detailed focus on the moment of creative emergence in recurrences of the practice. Distributed cognition focuses on how a range of solutions are imagined, shared and practised between participants. An analysis on the level of cognitive distribution, allows for the comprehension of how the creative process becomes oriented by a group of participants, highlighting the "horizon" towards which human actions pivot. This horizon is not random, but related to expressing a competent performance (Gherardi 2019) in the work setting, and is intimately connected to the dimensions highlighted by practice-based studies.

The analysis of the creative process with the theoretical tools of distributed cognition shows how an emerging collective cognition contributes to guiding the process in an ongoing progression of ideas' sharing, media representations, professional visualisations, coordination, attunements and improvisations. It is crucial to note, that this creative process does not correspond to a genial solution that comes into one person's mind. Instead, it is best understood as a process of negotiation toward a collectively shared idea that still needs to be achieved. Although the level of analysis is cognitive, it is by no means deterministic. Indeed, creativity does not correspond to the solution of a single problem, but rather a collective construction of various possibilities negotiated between the participants. However, even if the process is flexible and constantly changing, it does not mean it is impossible to understand what happens, and why it develops in a certain way. The distributed cognition analysis of creative performance gives us insight into, and allows us to grasp, the progress of participants' cognitive conversation (encounter). This conversation - or encounter - is not only mental and linguistic, but involves bodies and artefacts. The progress of this cognitive conversation provides many traces, especially human ones, of how creative output developed and emerged. In particular, the agential distribution among participants is not a rational succession of individual decisions, rather it is a collective cognition that emerges from the mutual influence between participants. In this respect, one person influences/ affects others by making them do things, and is, in turn, influenced by what others say or do. Collective cognition is thus emergent; it cannot be described through the interpretative lens of rationality, but can be unpicked by employing a relational map of the mutual influence/affect between the participants. Thus, this approach is coherent with the relational and processual turn in OC.

5.2.2 About ANT

The third research question (RQ: What is the role of materiality in the practices of OC?), demands an approach that goes beyond the human centred analysis of creative practices. To account for the agency of non-humans within the creative process, we rely on ANT and related streams of scholarship (New Sociology of Art and Studio Studies) that have a long history considering humans and non-humans in sociomaterial entanglements as symmetrical. ANT is well equipped to shed light on the dimension of encounters' related to the redistribution of humans and non-human agency in the creative process. Similar to distributed cognition, ANT explains connections to the dimensions highlighted by the epistemology of practice. In this respect, non-humans have resources and potentialities, participate in the power and positioning dimension, and contribute to reaching the object of the practice. At the beginning of the creative process, we - as researchers - cannot be sure which, and how, non-humans elements will participate.

As our case shows, all the network's elements initially appeared to be the same. In other words, we had yet to determine which of them, conditioned by the other participants (actants in Latourian terms), would have done unexpected things in the contributing to the becoming of the scene. Moreover, we also had to see which transformations and surprising things would have been recognised as interesting, valid, and creative by professionals. In the second article, we limit ourselves to underlining which elements are acting in the process, and by calling them intermediaries we are suggesting that their relationships open up new possibilities for the theatrical scene. The investigation goes further in the third article (Pellegrinelli & Parolin, 2021), where we demonstrate how the theatrical scene is constituted through a chain of mediations. In the third article, after listing the participants in the creative process and their connections, we trace how the initial abstract idea of the play slowly materialises through many mediations (encounters that bring transformations to the entities). We underline that the creation process leading to the show consists of chains of mediations that slowly stabilise themselves. It is only at the end of the process can the mediations that have succeeded be seen, and the encounters that have been fruitful for the show's creation, be unpicked.

In staging a theatrical play, many levels of mediation occur. For example, after crafting the main scenes in the staging practice, the scenes need to be unified in a larger composition. Therefore, when the scenes encounter themselves, other mediations occur. In these encounters, some scenes are cut, and others are developed. Furthermore, the moment the scenes encounter each other can give rise to passages that can be relevant to the show and become other scenes. A further level of mediation occurs when the show is performed and encounters the audience. The actors tune into the audience by changing the breath of the show from time to time. Finally, sometimes in the meeting with the public during the show, unexpected

things or improvisation happen on stage. If they work very well, sometimes these things become part of the show itself.

This contribution offers a sophisticated conceptualisation of materiality's role in the emergence of creative artwork as a means of addressing the third research question. It explains that in processual practice-based OC, mediations occur continuously from micro and macro levels as moments of assembly between humans and non-humans that contribute to producing creative emergence.

CHAPTER 6 Conclusion

My contribution shows how the epistemology of practice explains the processual OC as a complex multidimensional phenomenon where different elements meet in practice to give rise to creative emergence. The practical, tacit, sensible professional knowledge of the participants, the dimension of power, those of encounters (sociomateriality) and the common orientation of the practice (object of practice) combine in variant ways to generate creative practice. Throughout the thesis, I have illustrated how these dimensions are not separate, but rather, they follow each other in a chain where the relations - the encounters- tend to stabilise the process toward the production of a theatrical show or an artefact. The processual of organizational creativity therefore consists in the unfolding of these dimensions of practical knowing and doing. The conceptual framework I propose is based on the epistemology of practice for the following reasons because:

- 1. It explains organisational creativity as a processual phenomenon within a practice-based approach.
- 2. It describes how collective creation occurs in the practices of OC.
- 3. It illustrates the role of materiality in the practices of OC.
- 4. It shows that collaborative ethnography is a critical methodological tool for exploring how collective creativity is accomplished/performed in research practices.
- 5. It designs a more complex and processual concept of processual organisational creativity, taking account of the contextual, relational, material, situated and distributed aspects of the creative phenomenon.

I would argue that the cases considered here, enrich the practice-based processual creativity literature by drawing together the variant dimensions, and through the proposed frame, offers a way to analyse the complex phenomena of organizational creativity by unpicking a greater level of nuance in the range and scope of creative practices. Furthermore, it can enrich processual OC more generally, by offering tools to explore the collective aspect of group creativity, overcoming the limitations of a purely interactional analysis, and embracing analyses that are more knowledge and sociomaterial based. Finally, it contributes to explaining the role of materiality that remains to be deepened in the processual OC.

It was precisely the ability to read different dimensions together, that determined the use of an epistemology of practice over other paradigms in my investigation of OC. For example, I could have opted for a phenomenological approach, focusing on the dimensions of perception, affect, and embodiment in creativity. However, this would have partially displaced the non-human agentic dimension, and downplayed the importance of the dimension of power. Or, I could have opted for a linguistic and poststructuralist focus with an emphasis on the matter and loci of discourses. Again, this would have significantly underplayed the sociomaterial dimension of creativity, which I considered to be essential. Similar issues would have arisen with a distinctly feminist analytical framework, because here too the greater emphasis on dimensions of power and knowledge fails to account for the significance of sociomateriality and the necessity of understanding flow in the creative process.

This research can also contribute to Theatre Studies. First, it offers a practice-based reading of the process of creating a theatrical play, bringing recent theoretical frames from social studies into theatre literature. Placing practices at the centre of analysing a theatrical phenomenon means privileging the narration of making theatre over detached biographies or theatrical analogues. Consequently, this research allows the conceptualisation of the play not as the invention of a singular brilliant mind (a director or a playwright), but rather as the collective experience where different actors and roles contribute to the process of composing the mise en scène. In this sense, it offers a robust way to take account of the various contributions to the show.

The research also provides Theatre Studies with a coherent way to account for the materiality of a scene. Through the adoption of a practice lens and the ANT perspective, the study explores theatre-in-the-making to understand how agency in creative practices is distributed between humans and non-humans, which by definitional fiat offers and argues for a post-anthropocentric view of creative theatre processes. This focus is something of a departure from most theatre studies scholarship, which is still strongly human-centred.

This research offers insights for practitioners too. First, the study demonstrates how the form and content of a show emerge through collective negotiation. This simple assumption undermines the intellectual ballast supporting the omnipotent director narrative, and reinforces the legitimacy of the potential authorial responsibility of all participants in the creative process. However, this does not mean that everyone has the same agency to intervene in the process, and that questions of power are redundant. Rather it highlights the pertinence of human and non-human participants, with their specific characteristics and relationships, as decisive for the emergence of a creative product. Therefore, this research invites practitioners to discuss how a show emerges; engendering a collective process to enter the narrative of a shows genesis which could be communicated to the audience. Furthermore, the research may help practitioners to think about the use of non-humans in theatre, and to develop an awareness of non-human agency in the creative process. In the theatre, there has always been a great deal of experimentation on the use of objects, but there has also always been a supremacy of the human. New experimentation scenarios could open up by increasing awareness of non-human agency in the transmission of emotion and content.

My research is not without some limitations, which relate to its micro dimension and the specificity of the case. The first limitation concerns the focus on the creation of a single scene of the show. For this reason, an analysis of an entire show's creation would no doubt allow other complexities to emerge. For example, analysing a more complex network, would demand the consideration of several passages in the process that necessarily overlap. Therefore, the analysis could have been less linear and more difficult if we had zoomed out with greater longevity. Similarly, our micro-analysis described some nuances of dimensions that could be developed further. For example, in the power dimension, the gender issue is only partially considered. Equally, aspects of our focus on negotiations, agreements and attunements between the participants, might be interpreted as underplaying the nature of conflicts. It is arguable that this aspect which might have been explored further. Moreover, the section that considered the concept of sensitive knowledge could be further explored with affect literature, deepening the testimonies of the protagonists and their sensible relation with the artifacts. Future research might consider a more expansive reading of the object of practice dimension, so as to explore the progress and flow in the succession of phases of the collective creative process.

The most obvious source of both strength and limitation, is that the thesis focused on a single case of theatre production. It is not beyond the realm of possibility, that what emerged in this research might be confronted with other productions by theatre companies that, for example, use different staging practices. In traditional stage practices, the text of the drama is not created in the rehearsal room, but written in advance by the playwright and staged - almost without changes - by the company and the director. While in others, like in our case, the text does not exist, or in so far as it does, it is a malleable canvas, only given form by the group work in the rehearsal room based on the scenic translation of the participants' ideas into the performance. It would be a worthy exploration to find out whether our proposed theoretical framework also works, or can be elaborated within, other theatrical traditions and contexts that use different creative practices. Finally, if our research contributes to the processual practice-based OC, the theoretical and methodological proposal should arguably be tested in contexts of collective creation of other products, such as the creation of artefacts and innovations of various kinds. Therefore, understanding the scope of the theoretical contribution, suggests applying the proposed frame beyond the realm of the artistic.

To consider how this multidimensional model can help us to read ever-larger chains of creation, assessing how the relationships between small established networks constitute a more extensive network would be an initial step. In that respect, a suggestion for future research is to overcome the limitations of microanalysis by exploring the relationship between individual scenes and the entire theatre show. In this way, further exploratory research may shed light on the capacity of the theoretical frame to account for the creative processes of a complete theatre

show. The analysis of the four dimensions could be implemented and enriched by connecting them with other studies and focusing on particular aspects of collective creation. For example, the dimension of power in processual OC could be enriched by the studies on leadership (Carroll, Levy & Richmond 2008; Raelin, 2016) and gender studies (Fotaki & Harding, 2017), in organizations to understand how certain dynamics impact on collective creation with greater depth. The dimension related to sensible knowledge could be expanded through the phenomenological literature (Strati, 1998) and the literature on affect (Gherardi, 2017b) to better grasp how atmospheres and bodies impact the creative process. The dimension of sociomateriality could be further explored through neomaterialist approaches like that of Deleuze and Guattari (1980) about agencement (assemblage) and the concept of relational ontology and entanglement proposed by Karen Barad (2007; 2010). These perspectives applied to processual OC could open rich new lines of research on the role of materiality in the collective creative process. Finally, the dimension of the object of practice could be much more connected to Csikszentmihalyi's (2013) notion of flow, to deepen further the processual dimension of practices in the processual OC.

Finally, as mentioned above, this multidimensional model could be applied to contexts of creation beyond the arts. In particular, it offers a key to understanding purely organizational and entrepreneurial contexts, highlighting how process-organizational creativity is a complex phenomenon that is difficult to control. However, future research may demonstrate how organizational creativity can be implemented by working on the dimensions I have outlined. For example, implementing the participants' knowledge in the process, being aware of the participants' agency and increasing the opportunities for experimentation, negotiation, and meeting between humans and non-humans are actions that could foster organisational collective creativity.

As a final point, I imagine this work on theatre practices could also be read as a great metaphor. Just as an extended show comprises several scenes, an extensive organizational creative process comprises stabilized micro-processes and networks. In this respect, as the epistemology of practice suggests, the micro dimension simply enters in continuity with the macro one without breaks.

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