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Tracking the emergence of Affective Value: a performative study of the affective and agential capacities of digital technologies in value creation.

Abstract

In the context of an "Ethical Economy", the sources of value creation are changing, thus value itself is changing, because of the disruptive influence that digital technologies and finance have on established ways of working. Here, the relevance of "intangible" resources such as knowledge, flexibility and brand as sources of value is becoming paramount for companies, as the capacity to sustain social networks for the creation of these "intangibles", based on relational affects, is increasingly displacing labour time as new value measure. Affects are thus becoming the new measure and source of value, as digital technologies are making working practices shift. To understand how these affects are formed, so that in the future it will be possible to stabilise affects as a new general equivalent for value measurements, this research followed this sociotechnical phenomenon of change in the nature of value and working practices, by tracking how digital technologies are making affects emerge in working practices within academic and professional settings. I executed this work by adopting Gherardi's post-epistemological approach to practices as theoretical framework, because of its focus on affects and material agency, and a research strategy focused on a post-qualitative methodology based on 44 reflexive and performative audio/video recorded interviews, accompanied by pictures and a reflexive diary as secondary methods of data collection, to help me resonate with the affects as embodied knowledge coming from this sources. After analysing the data through a Reflexive Thematic Analysis, I obtained a conceptual framework that explains how affects as value is emerging as digital technologies are interacting with four working practices, persuading, controlling, searching and choosing space time, in the context of four different posthuman conditions of working: working as working together, working as an individual activity, working as knowledge creation, working as situated activity.

DURHAM UNIVERSITY BUSINESS SCHOOL

Tracking the emergence of Affective Value: a performative study of the affective and agential capacities of digital technologies in value creation.

A thesis submitted for the degree of Doctor of Philosophy

Supervisor:

Prof. Jeffrey Hughes

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Introduction

1. RESEARCH CONTEXT

1.1. Creating value as ethics in an Information Society: the rise of Adam Arvidsson's "Ethical Economy"

In the context of the Information Society, a new form of value is emerging. This value is flanking the traditional value based on prices maximised by organisations and, in some cases, it is merging with it, as the corporate economy is starting to embrace it (Arvidsson; 2010, Lazzarato; 1997). This value is emerging because ongoing processes of financialization of the global economy and digitalisation of working practices are taking place, and these simultaneous phenomena are causing a transformation of the production dynamics (Benkler & Nissenbaum; 2006). As these processes become centred around the use of knowledge as mean of production available to multiple actors at the same time, this implies a delocalisation of work and an increase in importance for social networks in industrial activities, and eventually makes complicated to consider labour as a unitary activity executed by individuals. Consequently, it becomes hard to measure value in relation to the quantity of labour time employed to execute a certain working task, as it is affirmed, in different fashion, by both Marxists and Neoclassic – Utilitarian theories of value (Arvidsson; 2009, 2010, 2012, Arvidsson & Peitersen; 2013). According to this research project, the contemporary Information Society is instead witnessing the emergence of a form of value unrelated to labour time, which is linked instead to the quality of social relations that permits to the actors involved in the working activity to organize themselves in the middle of this economic complexity (Arvidsson; 2010). Social relations of good quality allow, in fact, to attract affective investments such as goodwill, reputation or employee motivation (Arvidsson & Colleoni; 2012) that foregrounds the formation of temporary social networks in which the participants proficiently cooperate for the creation of three "intangible" resources generative of value. These are:

- <u>Flexibility</u>, as the ability of a company to rapidly adjust its operations to markets change;
- <u>Brand</u>, as the affectively significant relations that a company is capable to build, in relation to stakeholders, customers and the public;
- <u>Knowledge</u>, as the codified or tacit knowledge at a firm's disposal.

(Arvidsson; 2009).

Arvidsson & Peitersen name this economy emerging around the production of these resources "Ethical Economy" (Arvidsson & Peitersen; 2013).

To explain how these intangibles are constructed in the context of the "Ethical Economy", the networks that create these resources emerge because an affective intensity, related to the affective investments, is generated from the interaction of these human/nonhuman elements in the context of a working practice, and this intensity allows these elements to stay together in that practice (Arvidsson; 2012). To briefly define "affective intensity" or affects as intensities (an appropriate assessment of this term will be given in the literature review chapter), these are pre-cognitive sensations that circulate, in the form of bodily experiences situated in atmospheres, between humans, objects, spaces and other forms of living. For this reason, they are relational, and not individuals, feelings and sensations, and their emergence can be bolstered upon the agency of the nonhuman (Massumi; 2002).

To explain why this economy is defined as "ethical", these affective intensities are created with the help of ethics, conceived not as ways to create universal laws based on a common understanding of morality, but as ethical practices, therefore as ways to create a shared "nomos" that allows the emergence of specific values and norms, around which a working community can form (Arvidsson; 2009,2010). From this understanding, this project also assumes that these ethics contribute to produce this form of value as this value is enacted by the emergence of affective intensities linked to the quality of a social relation in working practices. In the "Ethical Economy", affects as intensities related to ideas, discourse or materialities and ethics as embedded in relational networks are thus productive of value, and the two entities, value and affects, coincide.

As aforementioned, this process of change in the nature of value is materializing because two processes, the digitalisation of work and the financialization of economic activities in the context of Information Society, are taking place. To explain how these phenomena are leading to the emergence of value as affects in the context of an "Ethical Economy", this is happening because these two processes are causing:

- A change in the nature of work brought by digital technologies, from individual to social activity;

- A mutually reinforcing dynamic, between a shift in the space of affective intensities from the private to the public sphere, as described by Gabriel Tarde as a "remediation of affects" (1902); and the increasing measurability of affects as these enter the public sphere, through the adoption of different methods such as Sentiment and Network Analysis (Arvidsson; 2010, 2012). This is creating a new, still unstable, "General Equivalent" for the measurement of value which is increasingly employed by companies, called by Arvidsson "General Sentiment" (Arvidsson; 2009, 2010, 2012).

The change in the nature of work is thus simultaneous with the shift in the role of affects in the public sphere, and with the emergence of new ways for measuring these affects for economic purposes. Ultimately, the change in the nature of value is the product of these two developments (Arvidsson; 2009, 2010, 2012). For this reason, companies are starting to consider affects as creators of value, and consequently to maximise the creation of this value in their strategies and policies.

After introducing the socioeconomic context of this research, to explain its focus it is necessary to say that, even if the advantages of this "ethical" economy based on affective intensities are gaining importance in the strategies of companies and governments, these and other institutions still cannot take full advantage of them, and therefore affects cannot replace labour time as a new standard of value, because of the lack of stabilisation of this new value measure. Affects, in fact, are considered differently by the different companies and consulting agencies in their measurements; and eventually this results in the impossibility of considering them as a new standard of value. To achieve this objective, it is necessary to reach a shared agreement around a common conception about the formation of these affects. To provide a way to think about this formation, to pave a way to reach, in the future, a stabilisation of such new value measure, is the main objective of this research project.

1.2. Value of the Research: mapping the emergence of affects as intensities in "ethical practices" for value creation.

"Ethical Economy" is thus a term that points at a stage in the development of an economy where, because of the combined influence of the digitalization of working practices and the financialization of the global economy, affects become a fundamental part of the processes of value creation. These affects are conceived as dependent on collective ways to create the common values and norms that staple the creation of temporary social networks which found those value creation practices on which the creation of "intangible" resources is based, thus allowing affects to emerge. Ultimately, according to Arvidsson & Peitersen, affects analysis becomes therefore fundamental for value creation purposes (2013).

By looking at this problem from the side of the digitalization of labour, with the issue of studying how finance is also allowing this new value to emerge, the literature on Information Systems is currently missing a study that analyses how the agency of digital technologies is changing the nature of value, as their influence on established working practice is allowing these affective intensities that constitute value to emerge, as these connects the relations between human and nonhuman actors involved in their use.

Arvidsson himself states how a study that enquires how these affects are formed was still missing (Arvidsson; 2012) as him and other authors such as Peitersen and Colleoni (Arvidsson & Peitersen; 2013, Arvidsson & Colleoni, 2012) calls for the stabilisation of affective intensities in value creation, for the purposes of creating a better way to measure how value is created from affects (Arvidsson; 2009, 2012). This is ultimately the aim of this research: namely, to track the emergence of these affective intensities – thus, their formation - as they envelop working practices productive of value, so that it will be possible to understand how affective value as the basis for "intangible" resources, is formed. By executing this task, it will be possible to open a way to understand how a new, post-capitalist, standard of value can be affirmed in global economics, in the future. In the next chapter these aims will be expanded and deepened in the light of the results of the literature review.

In this thesis I am, thus, proposing a way to understand how value is formed in the relational processes animated by elements such as discourses, materialities, institutions and ethics that lies at the core of the creation of the "intangible" resources. This view can bring forward a new way to think about how value is created, in opposition to the views on the matter coming from neoclassical or Marxist theories of value. As I will now explain, I think that the latest developments in the fields of practice-based theorising in Management and Organization Studies (MOS) make now possible to achieve this task, namely of mapping affect formation in the sociotechnical process of change brought by digital technologies to working practices, for framing the value coming from these affects.

Now, I will explain why this development is now possible to achieve, by starting from the description of the theoretical framework of the research.

2. THEORETICAL FRAMEWORK

2.1. Philosophical context of the research. New Materialism and the "Turn to Matter"

The influence of the material world in the human one is a social – and material, as it will be now analysed – phenomenon that has ignited a broad debate in the humanities and social sciences. To explain it, it is necessary to resort to philosophy.

The contemporary philosophical "New Materialist" tendency in arts, social sciences and humanities is an umbrella term that regroups the work of various authors such as Deleuze (1988) - whose work is understood by many authors as the starting point of this tendency (Coole & Frost; 2010), Bennett (2010), Latour (2005), Thrift (2004), Barad (2007), Braidotti (2013) and Haraway (2015). The work of these authors informs fields of theory such as post-structuralism, post-colonialism and feminist studies, which

all share a foregrounding of the materiality of the world and everything in it in their analysis, in what they call a "turn to matter" (Coole & Frost; 2010). These theories acknowledge the role of material forces in producing the social world, in the frame of a postmodern relational ontology founded on immanence, in opposition to Cartesian dualism (Coole & Frost; 2010). New materialist theories thus cut across the dualism between human and non/human (or, for some authors, more-than-human) worlds, to embrace instead the idea that these two spheres are intertwined (Fox & Alldred; 2014). As these theories blur the distinctions between the social and the material in their deconstruction of previously established ideas of the material as separated from the social world, they also challenge the definition that mind, and body are separated. This condition has a relevant impact on how ontology and epistemology are conceptualized in these theories, and this has relevant consequences on the research methodologies based on these philosophies. In fact, New Materialist theories avoid postmodern social constructionist tendencies based on the interpretive role of language in the construction of the social reality, to focus instead on how social reality is produced at the intersection between the material and the social (Gherardi; 2021).

2.2. Sociomateriality as a foundation of New Materialism. Agency as "the capacity to affect and be affected".

According to Fox and Alldred (2018), we can identify three different propositions at the foundation of the New Materialist theories:

- The material world and its contents are not stable entities, but relational processes in constant flux;

- "Nature" and "culture" should be considered as part of the same social and material world, therefore in continuation with each other;

- The material world has the capacity for "agency" – the social actions that define the world do not only come from human actors, rather the material and the social worlds have the capacity to "affect and be affected" (Deleuze & Guattari; 1988).

From this standpoint, the "turn to matter" advocates the entanglement between human and nonhuman agencies: an ontological and epistemological condition that is referred to as Sociomateriality. This notion, which reflects the new "vitalist" approach to the study of matter as a lively agent (Bennett; 2010), radically differs from the old dialectical conceptions of materiality. The concept of sociomateriality acknowledges the agential capacity of matter in its being entangled with the social world: it is important to highlight this

idea, as it is of crucial importance for the conceptual approach of this research project. To exemplify the relevance of Sociomateriality to understand the qualitative shift in the social dynamics in the context of postmodernity, the recent experiences of COVID 19, the climate change caused by the introduction of polluting substances in the biosphere, and eventually the unwanted return of the nuclear threat provided by the presence of a global nuclear arsenal in the context of the recent Ukrainian war, demonstrate how the material is capable of intervening in the human world. Because of such phenomenon, established concepts such as agency, power, identity, which were previously confined to the human world, now require to be reworked in the light of the "turn to matter".

As anticipated in the previous paragraphs, there are different theories that give an ontological and epistemological foundation of "sociomateriality" (Fox & Alldred; 2014), especially in the field of Information System studies that interests this research project; these will be analysed in the literature review chapter.

2.3. Sociomateriality, digital technologies and value creation.

As the agency of the material is gaining importance for understanding social dynamics, this situation is also reflected in the influence that new information technologies are having on labour and, consequently, on established dynamics of value creation. In the literature on value creation and technology there is a growing interest for understanding how digital technologies are changing such dynamics (Reddy & Reinartz; 2017, Breidbach & Maglio; 2016, Kaartemo & Helkkula; 2018), and sociomaterial approaches are taking place as analytical tool to address this transformation (Ramaswamy & Ozcal; 2018). Currently, this issue is being addressed under different viewpoints. To give two examples, Mele et. al (2018) addressed matters of value creation and destruction in the context of cognitive technologies; Russo-Spena et al. (2019) studied how AI sustains value co/creation and innovation, in a work in which they use IBMWatson as a case study to understand how this technology prompts the emergence of new services for the customer, thus improving value creation as it changes innovation practices (2019). The discussion on this topic, even if has started, it still is in its infancy. In fact, the debate about human-machine interaction and value creation is still lacking behind (Russo-Spena et al.; 2019).

This work contributes to this debate, by showing how economic value as affective intensities in the context of digital working practices is produced, as the sociomaterial agency of digital technologies as "constitutive entanglement" between the social and the material (Barad; 2007, Gherardi; 2019) change

working practices, by following the theorising of Adam Arvidsson about the affective foundations of the "Ethical Economy" (Arvidsson; 2009, 2010, 2012, Arvidsson & Peitersen; 2013).

To complete this task, I chose to use the novel approach to the study of working practices as "Posthuman" practices invented by Gherardi (2019). As I will now explain, I decided to adopt this approach because it allowed me to study affects as intensities as enacted in relational, sociomaterial practices.

2.4. *Between the turn to affect and the turn to practices: Gherardi's approach to working practices as Posthuman Practices.*

In this research project I assumed the possibility to detect the flows of affects – and therefore, value – as these develop in the context of a sociomaterial working practice, by studying how digital technologies involved in that practice makes them change, in a sociomaterial dynamic of "constitutive entanglement" between the social and material entities involved in those practices. To execute this task, I studied these sociomaterial practices according to a framework on working practices as "posthuman practices" invented by organizational scholar Silvia Gherardi (2019). I chose to follow this approach for this research because it connects the recent turn to practices in organization studies and social sciences, to the turn to affects in the field of studies of emotions in the context of studies of working practices, as it offers multiple research entry points for studying working and organizing from a practice perspective, in the context of what she calls "practice-based" studies, or "studies of knowing in practice" (Gherardi; 2017, 2017b, 2019, 2021).

In fact, according to Gherardi, the turn to affects and the turn to practices share three theoretical commonalities:

- An interest for a relational epistemology that gives importance to practices, not possession
- A focus on embodiment and the body as the site of knowledge
- Sociomateriality as the constitutive entanglement of the social and the material.

(Gherardi; 2017)

Because of these commonalities, as it studies the performative intra/acting of the sociomaterial elements in a working practice, this approach to practices can detect the affects present in that practice as these affects circulate around that practice. As it will be investigated in the next chapter, in this context the term "agencement" explains how the sociomaterial agency of digital technologies relates to affects creation in working practices in the context of Gherardi's approach to practices.

In a Posthumanist Approach to practices based on affects as intensities (which, as it will be seen in the methodology chapter, are framed by Gherardi as "ordinary affects"), specific arrangements of sociomaterial elements in working practices allows the emergence of such affects, while in return, these intensities are the forces that keeps the practice elements in the practice together, or make it change, in a relationship of co-constitution (Gherardi; 2017). A dynamic interplay therefore exists between the two social entities, and in this dynamic, affects are the "engine" or the "glue" of those practices in their endless becoming. Thus, according to the framework of this research, affects are a relational force related, and co-created, to sociomaterial processes of connecting, as these processes allows the sociomaterial elements of a practice to be interconnected, while these elements acquire agency in virtue of that interconnection. As these connecting processes ultimately depend on these sociomaterial practices, this means that in this context the practice is agential in itself, because it is the practice that makes possible, for the sociomaterial elements, to acquire agency.

A posthuman practice-based approach to working practices is therefore capable of detecting affects in their formation, as social processes that circulate in the intra/activity of the sociomaterial elements of a practice – thus, as agential entities on the assemblage of that practice that eventually solidify that practice, or make it change. This ability is what is needed to proceed towards studying how affects are created in ethical practices, so that social networks can be temporarily created to produce "intangible" resources and therefore, affects as value.

By understanding affects in working practices as they are conceptualised by Gherardi (who follows Deleuze), for their "capacity to affect and be affected" of the "constitutive entanglement" of the sociomaterial elements of a posthuman working practice, this research project framed the agential ability of digital technologies in the creation of a new "affective" value, by understanding how affects flow and are formed in the sociomateriality of a practice, as affects co-constitute that practice. This project thus follows down the lines of scholars such as Arvidsson (2009, 2011, 2012), Negri & Hardt (1999) and Massumi (2018), that advocates the emergence of a new form of value related not to labour, but to affects and affective investments in "intangible" resources such as innovation – which are now central for the development of what is called "Ethical Economy" (Arvidsson & Peitersen; 2013).

3. METHODOLOGY AND CONTRIBUTIONS

3.1. Research Approach.

To conduct this research, I completed 44 semi-structured interviews, both online and in-person, 32 of which were video-recorded as main data collection tool. I conducted these interviews at two different times, from October 2022 to January 2023 and in November 2023 at various industrial and academic settings. I conducted these interviews with a performative, reflexive and embodied sensibility, which allowed me to track the emergence of these affects in the data report stage of this work, as these affects emerged from the interaction (or, intra/action, as it will be explained later in this thesis) between me, the participants and the nonhuman agents involved in the research process. With the same sensibility, as secondary data collection tools I used a reflexive research diary, pictures of the working settings and the video/audio tracks of the interviews, which I all used to help me evoke the affective atmospheres as the shared aesthetic experience in which affects can be felt at a bodily level. To analyse the data, I adopted a Reflexive Thematic Analysis, that allowed me to re-produce the affects coming from the data sources in the codes and themes through non-representational writing. Eventually, from the data analysis I obtained a conceptual framework that explains how affective value as intangibles is emerging, due to the sociomaterial agency of digital technologies, as two embodied structural characteristics of the practices – motivation and directedness of attention in the practice – allows affects to emerge, as these affects circulate around the practice and contribute to shape it, in the context of four different posthuman conditions of working.

3.2. Contributions.

This work shows how digital technologies are changing the nature of value, from labour-time to affects-based, as these technologies are changing the nature of labour, from individual to networked. It does this as it explains how the sociomaterial agency of digital technologies, which is affective, embodied and realised in practices, is allowing the affects that constitute this new form of value to emerge, as these same affects are contributing to this process of sociotechnical change.

Given how this research project wants to track the emergence of affective value by studying how digital technologies are making this value emerge, this work assumes the agency of digital technologies on working practices, thus on value, to be its focal point of departure. For this reason, it gives its main contribute to the literature on sociomateriality in Information Systems (IS). In particular, it gives a contribute to this literature by inserting in it an empirical example of a study based on a novel practice-

based theory/methodology of sociomateriality, as this stance assumes sociomateriality to be situated in practices. This condition problematises the epistemological stance of the researcher, as such an epistemological move implies that knowledge is not realised in the mind of the researcher but instead takes form at the level of the sociomaterial practices themselves. Because of this epistemological approach, which, in the case of this study, this work also touches the literature on practices and their epistemologies as a complementary field of study, and it inserts in it an example of a practice-based study based on a posthumanist post-epistemology of practices. Ultimately, given how a posthumanist approach to practices lies at the intersection of the turn to practices in MOS (Management & Organization Studies) and the turn to affects in the studies of emotions, and that this study focuses on how digital technologies are changing the nature of labour and value creation as these are making affects emerge in the "agencement" of working practices, it can said that these affects, as they co-create the agency of digital technologies, are contributing to change these working practices as well. For this reason, the second complementary literature to which this work will be the one on the Critical Perspectives on Affects in MOS. This work contributes to those literatures by inserting in them these two theoretical contributions:

- The main contribution of this research project, it introduces an empirical example of a practice-based study in the value co-creation B2B context and, with it, it brings to the field a theory that explains how value is co-created in posthuman practices, which is also a methodological tool that makes possible to follow how this value is co-created in the practices with the active contribution of digital technologies;

- The data tells how the enactment of working practices involves the use of aesthetic knowledge: thus, knowledge emerges as embodied as a consequence of affective intra/activity in the context of the practices in the posthuman conditions of working. For this reason, this work contributes to the literature on sensemaking in IS with a theoretical addition, as it shows how sensemaking is bodily constituted with the active agency of digital technologies in working posthuman practices.

I will now proceed with exposing the literature review.

Chapter 1. Literature review

1. INTRODUCTION

1.1. Research Frame. Sociomateriality in IS studies, Practices theories in MOS and their Epistemologies, and Critical Perspective of Affects in Management and Organization Studies. A Posthuman Epistemology of Practices to track Affective Value emergence in Digital Working Environments.

The major research aim of this work is to understand how value as affect emerge, as the sociomateriality of digital technologies makes working practice change. In this context, the challenge is that this work can be positioned in respect to various calls coming from different academic traditions sharing an interest for affects, practices and sociomateriality from a relational ontological perspective, thus it can be framed in multiple ways. For a matter of clarity, I will try now to expose these fields by framing the connections between them in a linear fashion, to obtain a linear overall argument that will make easier, at the end of this chapter, to understand how my work contributes to the relevant literatures. As affirmed in the introduction chapter, the question around how the affects that form value in the context of the "Ethical Economy" emerge, as digital technologies change the nature of labour and value, has been left unanswered so far. This work answers this question; therefore, this is the main gap in the literature that this research project fills. To do so, it touches three literatures, a main and two complementary ones, which now I will expose.

To explain the main literature to which this work contributes, to think about how value as affects emerge, it means to address the issue of studying how digital technologies (and finance, but this is the matter for another study) are changing labour to allow the emergence of such value. Thus, in the first place, this work assumes that digital technologies are changing the nature of value as they are changing the nature of labour, as these create social networks for value production that are embedded with affectivity. Therefore, to analyse the academic field that studies how digital technologies actively shapes the social world becomes paramount for this study. Given the sociomaterial orientation that I adopted, the first, and main, literature to which this research project contributes to is the literature on Sociomateriality in IS Studies (Boell & Cecez-Kecmanovic; 2012, Cecez-Kecmanovic; 2014, Elbanna; 2016, Niemimaa; 2016). To explain how this work contributes to such literature, the contemporary debate in the field is centred around two different conceptualizations around the nature of the sociomaterial entanglement, the Critical and the Agential Realist (Cecez-Kecmanovic; 2014). The Agential Realist ethico-onto-epistemology ideated by Karen Barad (2003, 2007, 2014), inspired the emergence of the sociomaterial trend called IS Agential Realism (Cecez-Kecmanovic; 2014, Niemimaa; 2016, Orlikowski; 2007, 2008) which departs from a relational ontological perspective, and sees sociomateriality as the entanglement of

the social and the material realised in the posthuman performativity of practices that allows the material and discursive elements of an IS setting to emerge with their properties and boundaries, in virtue of their inclusion in that practice. This view on sociomateriality - also called "Strong" sociomateriality in opposition to the other "Weak" Critical Realist version – does not assume that humans and nonhumans participants have independently defined properties, to posit instead that assemblages of humans and nonhumans are ontologically inseparable (Cecez-Kecamanovic; 2014). For this reason, the performativity of practices is deemed to be posthuman, as it does not admit separation between human and nonhuman elements (Barad; 2003).

This view sees the agency of digital technologies realised in the interaction (which this sociomaterial approach understands as intra/activity, accordingly to its onto-epistemological foundations) between material and discursive elements determined by the material-discursive practices, which in an Agential Realist framework constitute "the mutual constitution of entangled agencies" or, by other name, the "agential cuts" that determines the elements involved in that practice, according to their capacity of exerting agency to each other in virtue of their inclusion in that practice (Barad; 2007). In this field of sociomaterial theorising in IS there is an emergent interest in considering Practices as Epistemologies (Gherardi; 2012) as an interesting mixed theoretical/methodological point of departure to study this sociomaterial entanglement and its effects; and my study brings in the field an example of a study based on this approach to practice theory. It does so because, to understand how digital technologies are making affects as value emerge as they change working practices, it is necessary to embrace a perspective that makes possible to study digital agency in practices, therefore, in respect to (working) practices. This means that the practices themselves must be taken as the main point of analysis, rather than being considered as the outcome of the cognitive activities of human agents, because the agency of digital technologies displaces the role of human as the sole actors capable of intervening in the social world. As this is the foundation of the Practices as Epistemologies field, which takes practices, and not humans, as the source of knowledge of reality (thus displacing the role of humans as sole social actors capable of shaping the world), eventually, such a perspective is assumed by the relational ontology of practices that I adopted for this work, as this allowed me to study how digital technologies are enabling the emergence of this new value because of their influence on working practices.

For this reason, the first complementary literature that will be analysed in this review will be the literature on Practice Theory and its Epistemologies, as this work contributes also to this field of studies. This, in fact, includes the approach to practices as Posthuman Practices, or "Studies of Knowing-In-Practice" because of its post-epistemological stance (Gherardi; 2019), that is assumed by this research project to

be capable to explain how affects emerge in the social networks created by digital technologies for purposes of value creation.

In fact, as this approach to practices assumes the same Baradian ethico-onto-epistemology of intra/activity advanced by the Agential Realist position of Sociomateriality in IS, it assumes a passage from the human mind to sociomaterial practices as epistemic units that create knowledge, which results in a switch from an epistemology of possession of knowledge, to an epistemology of knowing in practices (Gherardi, 2021). "Practices as epistemologies" are therefore capable of evoking, thus, to detect and analyse, the emergence of affects as intensities in the posthuman performativity of practices because of their sociomateriality, as these are realised in the assemblages of humans and technologies, which are the "situ" in which the agency of digital technologies emerges in sociomaterial practices. Posthuman Practices as posited by Gherardi, are therefore the agency of digital technologies, as they create knowledge in practices as a sociomaterial, relational endeavour. Digital technologies are thus also creators of knowledge in a framework that sees agency as relational and distributed.

The theoretical framework of this approach to practices is based on three pillars, which will be analysed thoroughly later in this chapter:

- *Agencement*, an arrangement of social and material elements endowed with agency;
- *Formativeness,* which explains how the object of the practice emerges at the intersection between knowing and doing;
- *Affects,* as intensities – ordinary affects.

(Gherardi; 2019, 2021)

The third point is relevant for this work, because it explains how affects emerge from sociomaterial practices, as they co-constitute them, and because it foregrounds a critical perspective on affects in posthuman working practices. This critical perspective on affects is paramount for the ends of this work, as it highlights the role of affectivity in the constitution of organizational phenomena, such as identity, power, and structure of a company, thus offering an alternative view on how these elements are constituted, by evidencing, at the same time, the ethical and political elements that concur to form this process (Gherardi; 2016, 2017). This means that, as working practices are an organizational phenomenon, this work also inserts itself in the literature on the critical perspective of affects in organization studies (Fotaki et al; 2017), which is therefore the third (and second complementary) literature that will be analysed in this chapter. This is the literature that contains the gap to which I am responding with this research.

In particular, this work enters this literature by describing how a posthuman approach to practices can be used to track the emergence of those affects that, according to Arvidsson (2010), who in return references Lazzarato (1997), Hardt and Negri (1999) in this regard, are changing the nature of labour and value – which is the main topic of this research project. This work thus contributes to this literature by evidencing how these affects, with their agential – thus, critical – power over current forms of value creation practices is formed, by answering to Arvidsson & Colleoni's call to study this phenomenon from this point of view (Arvidsson & Colleoni; 2012). Because affects are related to posthuman practices and that, in the case of this project, these are dependent on the sociomaterial agency of digital technologies, it becomes therefore evident how it was necessary to adequately introduce the first two literatures, to be able to frame how this work contributes to the main literature gap it addresses.

Now I will proceed to review these literatures in detail, and I will include, at the end of the chapter, the research questions that resulted from this review, and that this research project aims at responding to.

2. SOCIOMATERIALITY IN IS STUDIES

2.1. *Sociomateriality in Information Systems studies: roots of the concept*

There is a debate around the roots of the concept of sociomateriality in IS studies, because of its long and complex theoretical history (Cecez-Kecmanovic; 2014). In any case, the general agreement nowadays identifies these roots in fields such as ethnomethodology, science and technology studies, post-structuralism, post-modernism and feminist technoscience studies (Cecez-Kecmanovic; 2014). However, three different traditions of thought stand out for bringing a relevant contribute to the development of the discipline, which contribute still resonates in the contemporary philosophical debate around the issue of the nature of the sociomaterial entanglement. These are: the Sociotechnical Systems perspective (Mumford; 1983, 2006), Actor Network Theory (Callon; 1986, 1986b, Latour; 2005, Law; 2004), and Practice Theory (Bourdieu; 1977, Reckwitz; 2002, Schatzki; 1996). To better understand how this work inserts in this literature and contributes to its contemporary philosophical debate, it is now necessary to briefly expand on these schools and their points of contact and differences. This is because these constitute different theoretical and methodological tools that the researchers can choose from to fit their needs in their studies on sociomateriality in IS.

- Sociotechnical Systems Approach

The Sociotechnical Systems Approach is a precursor to the concept of sociomateriality and a precursor for a determined view of sociomateriality (Cecez-Kecmanovic; 2014); moreover, it constituted a novel

(for the time) field of inquiry. This approach emerged in the mid-XXth century (Trist & Bamforth; 1951) to find the best ways to create relations between the social and material components of the nascent sociotechnical systems and jointly optimize them, to improve quality of life and economic performance. This school was mainly concerned with safeguarding the autonomy of "Man" from its potential subjugation, in working environments, to the "Machines", by highlighting the fundamental entwinement between the social and technical elements in these contexts (Bjørn-Andersen et al.; 1982). Enid Mumford, from the Tavistock Institute, brought a relevant contribute to the development of this field in IS (1983, 2003, 2006).

Regardless of its orientation towards mutual sociotechnical processes of development, which this approach is capable to analyse, many authors have found that studies using this approach tend to focus more on one of the two components: social or technical (Leonardi; 2012, Orlikowski; 2010). This is because this approach considers the social and the technical to have a degree of ontological separability, which means that these two entities are thought to be endowed with properties that are defined independently from their relations (Leonardi; 2011, 2012). As it will be seen in the next paragraph, this is important because, with this ontological positioning, this approach paved the way for the emergence of the Critical Realist perspective in the field of Sociomateriality in IS, one of the two philosophical positions that are animating the current debate on the nature of Sociomateriality in IS (Cecez-Kecmanovic; 2014). Therefore, the Sociotechnical Systems approach is relevant for the field for two reasons: because it started the academic interest towards analysing the entwinement between the social and the material, thus being a precursor for the concept of sociomateriality, and because it provided the conceptual foundations for the Critical Realist position present in the current debate on Sociomateriality in IS. On the opposite side, the other two theoretical positions, Actor Network Theory and Practice Theory, provide the basis for the other philosophical position, the Agential Realist assumed by this research project, which will be examined in the next paragraphs.

- <u>Actor Network Theory</u>

Actor Network Theory, or ANT (Latour; 2005) finds its origin is Science and Technology Studies (Callon; 1986, 1986b, 1999, Latour; 2005, Law; 2004, Mitev & Howcroft; 2011). It is a theoretical tradition that decentres the human subject from its position of supremacy in the sociotechnical assemblage, to consider instead nonhuman actors such as technologies, natural phenomena, documents, social structures, as equally responsible for the emergence of the social sphere (Cecez-Kecmanovic; 2014). Its epistemological focus lies, therefore, in the relations that constitute the networks between human and nonhuman actors, which in ANT vocabulary are called "actants", as these constitute determined social arrangements

(Latour; 2005). The focus lies on these relations because in the ANT tradition these networks are ontological: human and nonhuman actants only exist in virtue of their presence in these networks. These actants are thus considered to be enacted as relational effects of these networks, differently than what happens for the Sociotechnical Systems Approach that instead considers these elements as existing independently from one another (Cecez-Kecmanovic; 2014, Elbanna; 2016).

This intellectual tradition is important because it introduced in the debate about sociomateriality concepts such as relational ontology, posthumanism and nonessentialism, which are ideas that are in contrast with the Sociotechnical Systems approach to sociomateriality and its Critical Realist contemporary adaptation. Instead, these lie at the foundation of the Agential Realist perspective of sociomateriality, to which ANT contributes together with the Practice Theory approach that will be analysed in the next paragraph. For the ends of this review, it is anyway important to stress how the two intellectual traditions take two different paths within the Agential Realist stream of sociomateriality in IS. In fact, if the latest developments in Practice Theory foregrounds a specific epistemological position that results in the adoption of determined methodologies, because of its conception of the nature of the sociomaterial entanglement, in the ANT approach sociomateriality remains at a material-semiotic abstract level (Cecez-Kecmanovic; 2014) and for this reason, the adoption of an ANT framework for a study of sociomateriality in IS does not presume the adoption of a specific methodology (Elbanna; 2016). The field, in fact, includes examples of sociomaterial studies that have been executed with different methodologies, not directly related to the ANT tradition (Huang et al.; 2014, Introna; 2011, Wagner et al.; 2011). It is important to note this difference for the ends of this literature review: this lack of attention on specific methodological processes, in fact, does not make ANT capable to study affects as relational intensities, as it does not provide adequate epistemological and methodological tools to make them resonate on the body of the researcher, as embodied sociomaterial processes of connecting, because of its lack of reconnaissance of the micropolitical role of the researcher in the co-constitution of the assemblage under study.

In any case, ANT is the school that introduced in the literature the aforementioned concepts of relational ontology, nonessentialism and posthumanism, and it was important to introduce them here. In fact, such concepts eventually inspired the latest conceptual developments in Practice Theory, which are ANT inspired for this reason, according to its author, Gherardi (2019). These latest developments are relevant for this study and will be treated in the next paragraph.

- <u>Practice Theory</u>

This approach to sociomateriality starts in the "practice turn" in social sciences, and more specifically from its organizational studies branch (Gherardi; 2019, Nicolini; 2013, Schatzki; 1996, 2002, Whittington; 2006). As advanced in the Introduction, a practice approach to social sciences takes practices as the foundation for the formation of social events, and therefore they constitute the central focus of study in the field (Nicolini; 2013). Consequently, In Practice Theory studies of sociomateriality in IS the analytical focus falls on practices.

Gherardi divides this intellectual tradition in two subgroups, depending on their stance on the issue of the agency of the material in these practices: humanist and posthumanist (Gherardi; 2016b). To cite an example of a humanist approach to practices, Schatzki's practice theory (2002, 2005) departs from the consideration that humans are the sole agents that enact practices and that therefore allows processes of intelligibility of the social world, yet he recognises the influence of elements such as artifacts and material arrangements in influencing humans in their social practices, but ultimately he posits how only humans are capable to give purpose and affectivity to these material arrangements (Cecez-Kecmanovic; 2014).

Differently than the humanist perspectives on practices, a posthuman approach to practice instead gives more relevance to the influence of the nonhuman in the definition of the social world. As stated previously, an approach to practices influenced by ANT has taken place in the field, which can be defined "posthuman" (Gherardi; 2019, 2021). In this approach to practices, human and nonhuman elements are all active actors in the practice, and agency is here defined as distributed and relational, and performed in these practices (Gherardi; 2019b). In this strand of practice theory, neither humans or nonhumans are given ontological priority, as these two elements are thought to be emerging from the practices as relational effects, "and conceives of practice as the intermeshing of the discursive and the material that is mutually constitutive and continuously becoming, thus emphasizing the dynamic, ambiguous, and precarious nature of practice." (Cecez-Kecmanovic; 2014). A posthumanist approach to practice thus foregrounds a monist ontology which rejects any dualism (Gherardi; 2021). Even if this approach to practices takes inspiration from an ANT positioning on relational ontology, posthumanism and nonessentialism (Elbanna; 2016), it diverges from in it in an important aspect: if the use of an ANT approach does not imply the adoption of any specific methodology because of its conceptualisation of sociomateriality, in its latest developments a posthuman approach to practices is instead both theoretical and methodological (Cecez-Kecmanovic; 2014). In fact, from 2012 in the field it emerged the tendency named "Practices as Epistemology" (Gherardi; 2019, 2021) which includes three strands based on

different philosophies: phenomenology, pragmatism and posthumanism (Gherardi; 2021b). This approach is the one assumed by this study, and it will be described in the last paragraph of this section.

After introducing the roots of the sociomaterial thinking in IS, this review will now pass to describe the contemporary developments of this debate in the field, and then to analyse the epistemology of practices adopted by this work. Eventually, this operation will make clearer to understand how this research project sits within the literature on sociomateriality in IS.

2.2. The contemporary philosophical debate in Sociomateriality in IS studies. Critical and Agential Realism.

As anticipated in the introduction to this review, the current ontological (and therefore epistemological) debate in the field of Sociomateriality in IS studies is divided in two fields, depending on their conception of the nature of the sociomaterial entanglement: the Critical and the Agential Realists (Cecez-Kecmanovic; 2014). If the Critical Realist position conceives sociomateriality as the "imbrication" between the social and the material, by departing from a substantialist ontology that can be deemed as the continuation of the sociotechnical systems approach introduced in IS studies by Enid Mumford (Mumford; 1983, 2006) (APPENDIX 1 for further information about Critical Realism), in Agential Realism sociomateriality is the "agential intra/action" through which material/discursive practices define the relations from which the social and material elements involved in a practice emerge, as relational effects of this entanglement (Barad; 2003), in the context of a relational ontology (Orlikowski; 2007, 2010, Orlikowski & Scott; 2008). I will now expose the Agential Realist school of thought, accordingly to the ends of this literature review.

- <u>Agential Realism in Sociomateriality in IS studies</u>

The Agential Realist tendency in Sociomateriality in IS studies has emerged first, thanks to the work of Orlikowski (2007, 2010) and Orlikowski & Scott (2008), who based it on Karen Barad's Agential Realist philosophy (Barad; 2003, 2007) which constitutes its main, but not exclusive, philosophy, as it is demonstrated by the presence of works in the field that can be deemed Agential Realist but are not Baradian, such as Introna's (2011, 2013) and Riemer & Johnston's works based on Heidegger's notion of sociomateriality (2012). In any case, the Baradian philosophy is based on a relational ontology, posthumanism, nonessentialism (Orlikowski; 2007, 2009, Orlikowski & Scott; 2008) and for this reason, Agential Realism is deemed to be the offspring of the practice theory and ANT intellectual traditions on sociomateriality (Cecez-Kecmanovic et al.; 2014); because of this ontological status, Agential Realism also

proposes a post-epistemology that reworks the old Cartesian assumption that poses mind and matter as separated, and therefore the knowing process as a cognitive one in which humans superimpose their categories on reality to make sense of it (Niemimaa; 2016). As it will be seen, this has important consequences for a practice-based studies of the sociomateriality of IS, such as this one (Rivera & Cox; 2014).

To further expand on this philosophical concept, Agential Realism differs from Critical Realism because, differently than this last perspective, it sees elements such as humans, technologies, discourses and structures as lacking any substantive, independent characteristics, to define them instead as relational effects of determined performative practices. These elements, thus, acquire their essence in virtue of how they are connected in that practice, and this makes the practice performative, as practices makes social and material entities exists in its performance, and are thus enacted in practices (Barad; 2007, 2003, Orlikowski; 2010). Reality therefore exists as a nexus of relations, and it cannot be considered as existing outside of it. By building on this philosophical tenet, and particularly on the principle of the performativity of practices, the Agential Realist tendency takes the Baradian concept of "Agential Intra-Action" (Barad; 2003) as its onto-epistemological foundation of sociomateriality, in contrast with the concept of the Critical Realist concept of "Imbrication".

As it will be analysed also in the methodology chapter of this thesis, the concept of "Intra-Action" explains how practices involving both material and discursive elements, thus material/discursive practices, define the ontological relations determining the nature of the social and the material subjects as relational effects. It is therefore intra-action that determines the identity of these subjects, as the boundaries of such identities are performed in material/discursive practices. In Barad's theorising, practices enact the emergence of these elements because they perform an "Agential Cut" on them: agential cuts are therefore an onto-epistemological endeavour that, through practice, fix these elements temporarily (Barad; 2007). These "cuts" are at the centre of the epistemological model proposed by an Agential Realist position; this move posits consequences for the methodologies adopted in research practices, as specific methodologies as "agential cuts" can be mobilised to satisfy specific research needs.

Because of the intra-activity between material/discursive elements, the performativity of these practices is deemed to be "posthuman" (Barad; 2003) because it does not consider the separation between human and nonhuman; thus, it does not privilege the human actors over the nonhuman in the enactment of such practices, and it conceives these elements as ontologically inseparable (Orlikowski; 2007, 2010). The posthuman performativity of practices has implications for how agency is conceived in an Agential Realist framework. Agency is, in fact, not bestowed either on humans or technologies, because of properties

such as intentionality or autonomy, but instead emerges from these material/discursive practices, as the "enactment of iterative changes to particular practices through the dynamics of intra-activity" (Barad; 2003). Ultimately, it can be affirmed how, in an Agential Realist view of sociomateriality, agency is the material/discursive practice, and that the social and the material only exist in relation to their capacity to mutually constitute each other, therefore they exist as agents, or as agency, and not as self-defined subjects with inherent properties.

In this context, matter emerges through intra/actions in performative practices and is denied any transcendent characteristic outside of it. Consequently, in IS studies technology emerges as enacted by the agential cut of specific material/discursive practices and do not have any predetermined meaning or position (Barad; 2007). As the determination of matter as agent is dependent on these practices, which are immanent as they change depending on the disposition of the material-discursive elements involved in them, matter can be conceived as a process of materialization depending on such disposition rather than an inanimate autonomous entity (Barad; 2007). An example of the performative nature of materiality can be found in the study executed by Østerlie et al. (2012).

After describing this tendency, I can now analyse how the latest epistemological developments in practice theory, called "practices as epistemology", inserts themselves in it, as they also depart from a conception of materiality as entanglement. To avoid any repetitions, I will analyse this tendency as a paragraph in the next literature that I will analyse here. For now, it can be affirmed how this move is relevant for this research project because it entails a shift that puts immanent intra/activity, and not transcendent creation and possession, at the centre of knowledge production. This is the practice perspective that I have chosen for this research work.

After this introduction on the roots of sociomaterial thought in IS, and how its latest developments brought to the emergence of the "practices as epistemologies" methodological-theoretical approach in the field, it is now clear the relation existing between the posthuman approach to practices that I adopted for this research project, and the Agential Realist school of sociomateriality in IS. The two tendencies are, in fact, both rooted in the same ontological and epistemological positions, and therefore it becomes possible, for the researcher, to study the sociomateriality of IS by taking advantage of a posthuman practice approach that takes the performativity of sociomaterial practices as epistemological (and ontological) stance. In fact, as these practices constitute the foundation of sociomateriality, they express in them the agency of technology, depending on how different social and material elements are connected in this practice. Applied to this research project, this consideration implies that, by employing such a position on practices, I am capable to study the agency of digital technologies as they create affective

value; consequently, this work is inserted in the literature on practice theory in Agential Realist studies on sociomateriality in IS.

I will now proceed to analyse the second literature to which this research project contributes.

3. PRACTICE THEORIES IN MANAGEMENT AND ORGANIZATION STUDIES (MOS) AND THEIR EPISTEMOLOGIES

3.1 Introduction. A History of Practice Theory in Management and Organization Studies

To understand how the concept of "practices as epistemologies" interested by this research project emerged in the literature on Practice Theory (and how this concept become relevant for studies of sociomateriality in IS), this perspective has its roots in the onto-epistemological debate that has recently animated the field. In fact, practices as epistemologies, or "posthumanist epistemology of practices" (Gherardi; 2021) are not the only epistemologies of practices that can be found there. As a matter of fact, there are many different epistemologies, which can be divided into two subsystems, themselves internally varied: these are the humanist and posthumanist, which are called as such on the basis of their relationship with the issue of the nature of materiality and its relationship with the social world (Gherardi; 2019, 2021). To start introducing this onto-epistemological debate, and how this debate has influenced the development of practice-based theorizing in Management and Organization Studies (MOS), and, therefore, also in IS studies, it is necessary to draw the history of Practice Theory, so that it will be possible to understand how this debate has emerged.

The term "practice theory" associated with a turn to practices studies in MOS appeared in the Special Issue of the journal Organization in 2000 (Gherardi; 2016, 2021), named "Practice-Based Theorizing in Learning and Knowing in Organizations". In this issue, various theoretical and epistemological positions on the nature of practices emerged, and the need to define what a "practice-based-approach" to MOS, or its "turn to practices" was not yet present. In an approximate way, it is possible to regroup these positions in four main groups (which, in any case, do not include all of them): the cultural perspective, situated learning, activity theory, actor-network theory, and workplace studies (Gherardi; 2016, 2019). In these four groups, the main interest of inquiry was around the idea of knowledge, as, from their respective positions, these affirmed how knowledge was not a possession to be held in the mind, but an activity to be performed in practice (Gherardi; 2016, 2019). Therefore, at this point the idea of a practice started to be linked to the one of knowledge, as in "knowing in practice". This expression recalled the phenomenological tradition on knowing the world, which is split in two: as building, in which knowledge

is prior to knowing, and as dwelling, in which knowledge emerges from practices (Gherardi; 2016). The differences between these four streams have been described by Guzman (2013):

- For the situated action and sociology of translation approaches, he affirms how these have common roots in their considering "the primacy of emergent and contingent actions, the changing nature of contexts and settings, and the central role of improvisation, negotiation and persuasion" (Gherardi; 2016), but they differ in the importance they give to human and nonhuman elements, because humans are privileged in a situated action approach, while sociology of translation gives more importance to human-nonhuman relations;

- Activity theory and sociology of translation approaches both recognise the importance to have actor-networks as key units of analysis, yet the former attributes more importance, to the explanation of their nature, to cultural and historical events, while sociology of translation considers also human and nonhuman elements as having explanatory power.

In conclusion, it can be argued that these different approaches agreed on what the elements of practice are (e.g. actions, individuals, artifacts, contexts, embeddedness), but they disagreed on their main features. In any case, at this point of the theoretical evolution in the field, a common agreement did not emerge only on the matter of the elements of a practice, but also on the idea of entwinement as the rationality of the logic of practices (Sandberg & Tsoukas; 2011), thus it can be said that considerations around a relational epistemologies, which is of interest to this research project, have been present in the field of Practice Theory in MOS (Orlikowski; 2007).

In 2009, a new Special Issue of the Journal Organization Studies edited by Miettinen et al., named "The re-turn to practices" (2009) included both an acknowledgment of the long theoretical history of practice-based theorising, and a call for the development of vocabularies and approaches that could understand practices as situated in space and time, and as historically constituted and path dependent (Gherardi; 2016). The contextualization that these authors gave to this call provides another contribution to the categorization problem of practice theories which I mentioned in the previous paragraph. In fact, as in this issue the editors gave to the term "re-turn" a dual meaning;

- The first related to the establishment of a differentiation between those "first generation" authors who introduced in organization studies approaches such as cultural-historical activity theory (Blackler; 1993), sociocultural approaches (Chaiklin & Lave; 1993), and the pragmatists' theory of action (Joas; 1997);

- The second related to the need to start theorising again on the concept, in light of the recent developments in practice theories. These theories are linked to authors who considered practices important for their work, such as Bourdieu (1977), Giddens (1984), Foucault, (1978), Schatzki (2005), Garfinkel (1967) and other ethnomethodologists; Latour (1992) and other actor-network theorists, and Taylor (1991).

The authors stressed that it is from the development of a specific vocabulary that it is possible to enact a specific epistemology for studying practices, and that vocabulary and epistemologies are related, as they are linked to the specific academic interests of the researchers (Gherardi; 2016). Therefore, according to the editors it is necessary to develop a vocabulary, thus an "epistemology of practice theorising", capable to study practices according to their situatedness, processuality and historicity, thus introducing the problem of an epistemology of practices as proposed by this research project.

This issue therefore opened the way towards the problematization of epistemologies in practice theories. Now it will be discussed the last important Special Issue of Practice Theory in MOS, which by giving more characterisation to this problem, it allowed the emergence of a discussion towards practices as epistemologies, as it also laid the basis for a differentiation between humanist and posthuman practice theories in MOS.

3.2. Eikeland and Nicolini. The emergence of "post-epistemology of practices".

In the last Special Issue on Practice Theory in MOS, the editors Eikeland & Nicolini (2011) highlighted a problem of central importance for this research project. In fact, after they drew a new classification of practice theories based on their definition of practice, in this issue the editors considered the practice turn still incomplete, and they explain why by giving their definition to the term "turning practically", in contrast with the term "practice turn", with which they want to focus analytically on the practices of the knower (Gherardi; 2016). With the term "turning practically" the two editors want in fact to highlight how turning to practice means to develop a theory that "is about proceeding from within an activity, making its "grammar" explicit, opening new possibilities for action, and informing mindful, caring and wise conduct" (Eikeland & Nicolini; 2011). This move can be therefore read both as a call to focus on the practices of the researcher, and as a request for the researchers to assume a critical role that takes into account their values and political-ethical orientations (Gherardi; 2016). Therefore, "turning practically" is a call to answer theoretical and epistemological questions that, by then, started to characterize the field (Gherardi; 2016). In particular, these tensions manifested themselves as a contrast between the two

academic disciplines that have mostly informed the development of Practice Theory, philosophy and sociology (Guzman; 2013). According to Guzman (2013), a philosophical examination of practices is more interested in what happens before them, thus justifying them, by analysing the intentionality of practices and its motives, while sociologists are more interested in what practices create, thus in social objects such as structures and power (Guzman; 2013). Furthermore, the two disciplines create knowledge around practices in different ways, and this results in a situation where there are discrepancies between the theoretical-philosophical positions and the methodologies employed in empirical works on practices (Gherardi; 2016). Therefore, this tension existing between philosophy and sociology in Practice Theory results also in a debate around different ontological and epistemological positions in the same discipline. In this regard, according to Orlikowski (2010), in Practice studies in MOS there are two different fields, one that considers practices as an empirical phenomenon, and one that sees practices as epistemologies (Orlikowski; 2010), and it is in the middle of this conversation that, according to Nicolini and Eikeland, it is necessary to find a new vocabulary of practice studies, therefore a new approach to practices based on a specific ontological and epistemological position. To explain how it is possible to find a new epistemology of practice capable to realise the "turning practically" project of the authors, Gherardi deems necessary to investigate the linguistic turn in social sciences (Gherardi; 2016b). In fact, in the context of this turn, language is assumed to be the constructor of social reality, in opposition to those theories which sees languages as descriptive and representational (Gherardi; 2016), and a link existing between this turn and the practice studies in the work of linguistic philosopher Wittgenstein (Nicolini; 2013) makes the epistemological position based on social constructivism pertaining to the linguistic turn relevant to understand how a new epistemology of practices can emerge (Gherardi; 2016).

This is because, as language becomes the main actor in the construction of social reality, also the differences between ontology and epistemology are invalidated, and a mixture between ontology and epistemology takes place. Consequently, practices of knowledge production - or epistemic practices - products both the object of the study and the research methods that investigate that object, determining therefore both the ontology and the epistemology of social reality. These onto-epistemologies can be named, therefore, "post-epistemologies" (Gherardi; 2016), and they characterise not only the linguistic turn (in and out its relationship with the practice turn), but have influenced many different social disciplines, such as: social studies on science and technologies (Pickering; 1995), feminist theorising (Haraway; 1991), new feminist materialism (Barad; 2003), the literature on the turn to affect as non-representational theory (Thrift; 2005). By linking this onto-epistemological position in the linguistic turn

to the turn to practices through the work of Wittgenstein, a new way of thinking about post-epistemologies of practices is therefore opened in the literature on Practice Theory (or Practice studies).

To clarify the characteristics of a post-epistemology of practices, Cohen distinguished between theories of action and theories of practices (Cohen; 1996). She affirmed how theories of action in practice studies privilege to focus on the intentionality of human actors, as they produce meaningful outcomes (such as in the tradition of Weber or Parsons), while theories of practices in the same field decide instead to focus on "how conduct is enacted, performed or produced" (by following the examples of authors such as Dewey, Mead, Garfinkel and Giddens) (Gherardi; 2009). Thus, because of their phenomenological orientation, theories of practices assume objects as the outcome of relations happening in practices and therefore agency becomes distributed between human and nonhuman actors; this opens a way for enquiring sociomaterial relationships (Gherardi; 2016).

Eventually, the "turning practically" advocated by Nicolini and Eikeland resolves itself both in a proposal to categorise practice theories according to their epistemologies, and in a call for the invention of a relational - or posthumanist - epistemology of practices, in which the capacity of practices to highlight modes of ordering social and material elements in that practice is acknowledged, as the limits between doing and knowing in a practice collapse, and the intra/activity of research practices produces both the practice's known objects and the researcher as their knower (Gherardi; 2016).

The posthumanist epistemology of practices adopted by this research project specifically addresses this need. I will now describe the epistemology of practice position behind it, by starting from an appreciation of the variegated field of the epistemologies of practices, which at this point can be termed "posthumanist", as epistemologies of knowing in practice. By doing this, I will be able to clearly locate the approach to practices I adopted for this research project in the literature, accordingly to the aims of this Chapter.

3.3. The Epistemology of Practices approaches in Practice studies in MOS.
The concept of Epistemology of Practices firstly emerged in MOS in 1999, thanks to the work of Cook & Brown (1999), and it solved an issue that characterised conceptualisations of Managerial Work in MOS until that time, because of the ability of practice based studies to analyse managerial work as "a practiced craft, whose knowledge is developed and kept within situated practices of managing" (Gherardi; 2021). At that stage in fact, MOS scholars were growing increasingly unsatisfied with studying managerial practices as abstract, linear and prescriptive, and wanted to study instead practices in their everyday

developments. This had two motives: the need to study "real" activities as they were performed and to detect forms of knowledge that were difficult to determine because of their collective nature and situatedness in certain ways of practicing (Gherardi; 2021).

To find a solution to this knowledge-related issue, the "Epistemology of Practice" approach emerged in MOS, with its varied theoretical and methodological positions. As stated in the previous sections of this thesis, an epistemology of practices is the opposite of an epistemology of possession, as it states that knowledge is not something that practitioners possess, but something that resides also in knowing "how" to do a practice - as this is also constitutive of knowledge. According to an epistemology of practice, knowledge depends on the activity of knowing: thus, knowledge and knowing are related, and knowing and doing happen simultaneously (Gherardi; 2021). Cook & Brown refer to this epistemological process as the "generative dance" of knowing (Cook & Brown; 1999).

Because an epistemology of practice introduces the notion of knowledge as an activity, and it reconnects knowledge with the social and historical conditions that created – and will create – that knowledge, this means that assuming such view on practices allows them to be considered as the result of a collective knowledgeable doing (Gherardi; 2019b). Therefore, considering managerial practices as collective knowledgeable doing entails also an epistemological move to knowledge as activity and its displacement form the reign of cognitivism to the one of performativity (Gherardi; 2019, 2021). Moreover, as an epistemology of practices entails conceptualising managerial practices as "managing", thus as an activity in constant change, this results in an ontological and epistemological shift. This processual view on practices, in fact, require for the researcher to change their attention, from considering ontology and epistemology as separated, to consider them instead as mixed. This marks a transition, from answering questions about what management "is" or "how" it is done, to consider how they are constructing management as an object of study (Gherardi; 2019, 2021). This means that, by following Barad and her concept of ethico-onto-epistemology (2003), researchers must not only focus on what managers actually "do", but also on how the research tools they use become part of their inquired subject (Gherardi; 2021). Thus, by acquiring an epistemology of practice we also witness a change in the nature of knowledge, from universal to situated.

To explain what "situated knowledge" means, it is possible to recall the work of critical posthuman feminist Donna Haraway (1988). In her work, she criticises universal knowledge as knowledge "from nowhere" which falsely posits itself as universalist, while it is instead the product of specific times, cultures and spaces. It is therefore necessary to replace this view with one that sees knowledge as coming "from somewhere", thus as acknowledging its source, by making it accountable and located; in a word,

situated (Suchman; 1994). This results in a situation in which, in the context of an epistemology of practices, because knowing and doing are intertwined also situated knowledge and situated action cannot be separated, because knowledge creation always needs to consider its location in space, time and culture (1994).

Consequently, in an epistemology of practices that admits situated actions in its framework also the definition of what a context is changes. To use Gherardi's words, a context for situated action is no longer "a container for action but a situation in which the interests of the actors involved and the opportunities meet in the environment are reciprocally defined" (2021). Therefore, an approach to practices as situated actions entails a focus on elements such as relationships, communications and construction of situation, and the relationships with the material elements in that context, by paying attention at how these elements come together in that space and time, and express a contingent logic situated temporally and locally, depending on the situation (Gherardi; 2021).

Eventually, if management practices are examined with the lenses of an epistemology of practices which assumes a situated knowing, it means that they are described " in relation to situated actions, situated knowledges, and situated embodiment (in virtue of the relation of practices with the materiality of the context and the objects therein contained), whereby managers are not the central source from which knowledgeable doings come, but rather, they are sociomaterially situated, with their embodiment differently marked by gender, class, age, sexual orientation, and all other possible power signifiers" (Gherardi; 2021), and the passage from a "humanist" epistemology of knowledge possession to a "posthumanist" epistemology of practices in Practice based studies means acknowledging epistemology as ecological, thus dependent on the sociomaterial context made of elements such as technologies, human actors, discourses, cultures, environments, and the researcher, in which these come together to create the object of the practice as they contribute to create its situated logic. An ecological model of practice thus entails also a processual sensibility, nonessentialist and that assumes identities as the product of sociomaterial relations, and not for what they "are". From this situation, it becomes possible to understand how ethics become constitutive of the practices, as the ethics of the researcher contributes to construct the object of the study, and how acquiring an epistemology of practices entails accounting for how we live, in relation to the human and nonhuman world (Gherardi; 2021).

After introducing the concept of epistemology of practice in detail, I will now proceed in explaining the specific position on this matter that Gherardi assumes, which is also the one I assumed for this research project.

3.4. Gherardi's approach to posthuman practices. A critical approach to practices

There are many approaches in social sciences that can be termed "Posthuman", among these it is possible to find: Actor Network Theory (Latour; 2005, Mol; 2002), communicative constitution of organization (Ashcraft et al.; 2009, Kuhn et al.; 2017), affect theories (Clough & Halley; 2007), feminist new materialisms (Coole & Frost; 2010, Dolphijin & Van der Tuin; 2012), animal studies (Rautio; 2017), postconstructionism (Lykke; 2011). Gherardi's Posthumanist Practice-Based theory is a part of this conversation, as it decentres the attention from humans to focus instead on the relations between humans and nonhumans, and it is an approach to practices study based on a sociology of translation, in the principle of symmetry between humans and nonhumans (Latour; 1990, 2005), in a relational epistemology (Law; 1994) and in feminist new materialisms (Barad; 2007, Braidotti; 2013, Haraway; 2008). The focal point of this approach to practices is that it takes the epistemology of practices as a posthumanist project which decentres the human actor to focus instead on how agency is situated in sociomaterial practices, therefore, it takes practices as the units of analysis (Gherardi; 2019, Parolin; 2022), thus responding to the latest developments in the field of epistemologies of practices in Practice Theory in MOS. As it will be seen later, this position has consequences for the theoretical elements of a practice that are important for empirical analysis, and makes of this approach to practice studies a critical one.

As it has been analysed, the move towards an epistemology of practices is made necessary as agency is theorised as dependent on the performativity of sociomaterial practices (Gherardi; 2021), because in this context, knowing and doing become interrelated. Because of the agential role of materiality, knowledge becomes therefore an activity situated in practices, differently than the other human-based practice-based approaches like Schatzki's, Foucault's and Giddens' (Gherardi; 2019, 2021), and this is the reason why Gherardi takes practices as the unit of analysis, as there is no knowledge on practices that can be created by standing outside of them. Therefore, her approach to practice studies introduces in MOS a theoretical perspective that allows to study practices by shifting the focus of analysis from human actors and their activities to pay attention instead on the sociomaterial relations defining how technical elements, human elements, knowledge, discourses, ethics acquire agency within a practice in their affective intra/action (Gherardi; 2019, 2019b). In fact, decentring the attention from the human in the context of this relational materialist epistemology (Gherardi; 2019), results in having knowledge as an effect of this interconnecting process between human and nonhuman elements, and because of the materiality of a posthumanist practice, this knowledge is thought to be practical, sensible and aesthetic (Gherardi; 2019b). Thus, according to Gherardi, bodies and senses also contribute to the definition of a practice, as

"knowledgeable bodies", thus as bodies endowed with knowledge, because embodied sensations such as passion and involvement are relevant for the becoming of a practice. As it will be seen later, this move connects this theorizing on practices with the turn to affects, as it shreds light on how practices are socially sustained (Gherardi; 2017).

Talking about the nature of practices, as knowledge and practices become intertwined in the sociomaterial entanglement, for Gherardi practices "are" nothing, because they have no intrinsic characteristic as they are not the expression of the cognitive activity of the human mind, but rather become a process of interconnecting human and nonhuman elements, as it foregrounds a change of epistemic focus, from entities to sociomaterial relations (Gherardi; 2021), and this entails also a change in the vocabulary, from "practices" to "practicing" (Gherardi; 2019). According to Gherardi, a posthuman practice approach therefore is not about knowing "why" a practice is executed, thus about a search for causal explanations of the practice, but about "trying to illustrate how things and realities come to be as they 'are' as relational effects, and how also the researchers are shaped by the same process" (Gherardi; 2019); and a move towards a posthumanist epistemology of practices entails considering knowledge as "knowing-in-practice", which is the alternative name of her approach to posthuman practices (Parolin; 2022). Ultimately, for Gherardi a practice is not a set of activities performed by humans, but as "a mode, relatively stable in time and socially recognized, of ordering heterogeneous items in a coherent set" in the context of a situated practice (Gherardi; 2006), and practicing is not seen as knowing "what" is necessary for the practice to go forward, but is knowing "how" and "what next" for the practice to evolve (Parolin; 2019).

As Gherardi promotes the idea of taking the principle of the "primacy of practices", rather than subjects and objects, in the creation of knowledge about practices, she assumes an agential realist onto-ethico-epistemological viewpoint based on Barad's sociomaterial concepts of diffraction, agential cuts and posthuman performativity (Barad; 2003, 2007) (which will be described in the methodology section of this work, as it constitutes the onto-epistemological position that I assumed for this research project). By assuming this Baradian, ethico-onto-epistemological approach, a posthumanist practice-based approach wants thus to abandon investigations of practices led by ontological questions to focus instead on what research practices "do" on the phenomena under analysis, because the researcher's epistemology becomes performative, as it will be seen later in this paragraph (Gherardi; 2019).

Assuming such an onto-epistemological stance, which foregrounds knowledge as embodied and situated in practices, makes of this approach a critical one. By assuming an epistemology of practices – thus the intertwinement between knowing and doing - based on an agential realist stance, in fact, results in a

theorisation of agency as distributed and located in performative – sociomaterial - practices, rather than coming from the will of human agents (Gherardi; 2017); this implies undertaking a critical stance as it shows how these practices are socially sustained by a normative base, which is ethical, affective and aesthetic, as these practices become dependent on embodied experiences such as passions, which are linked to such base.

To explain this innovation in practice theorising, as an epistemology of practices implies displacing the human from its "throne" of creator of knowledge and knower, to instead foreground a theorisation of knowledge as a collective knowledgeable doing between humans and technologies, discourses, contexts and nonhumans, which assumes the agency of the nonhuman in situated practices as co-contributors in the creation of this knowledge, it shows how the creation of knowledge in practices – and thus, the practices themselves - is sustained by social factors, and not by the mind of the researcher, and how consequences relevant for the social world can be produced by the agency of the nonhuman. (APPENDIX 2)

The theoretical framework of this approach is based on three concepts: affects, agencement and formativeness (Gherardi, 2019), which will be now analysed.

3.5. The theoretical framework of Gherardi's posthumanist practice approach: Agencement, Formativeness, Affects

Silvia Gherardi's theorising on Posthuman practices can produce multiple knowledges by studying various theoretical elements that become important for the empirical study of the practice, because of its onto-epistemological stance. These are: situatedness, knowing-in-practice as collective knowledgeable doing, practical knowledge and aesthetics, sociomateriality as entangled human/nonhuman agency, normative, discursive, institutional infrastructures (Gherardi; 2019, Parolin; 2022). This approach proposes to follow the becoming of practices as relations by following five "handholds" to the study of practices: practicing as maintaining a common orientation, sensible knowing, sociomaterial infrastructure, normative infrastructures, and discursive infrastructures (Gherardi; 2019). The theoretical framework of this approach to practices is based on three different concepts: agencement, formativeness and affects (Gherardi; 2019), that now will be exposed.

- <u>Agencement: thinking critically about practices</u>

The concept of agencement in a posthumanist practice explains how a practice can have agency, and how all the elements of a practice acquire their agency because of their interconnectedness in that practice. It

is related to the concept of formativeness of a practice, because both posits an epistemology of becoming (Gherardi; 2017). This idea is taken from Deleuze and Guattari's philosophy and it is directly related to the concept of "assemblage" that is the English translation of the term (Gherardi; 2017, 2019). The two terms though, have acquired two slightly different meanings after translation, which refer to two different, but related, aspects of the same phenomena. If the word "Assemblage" refers to how various elements are put together according to a specific arrangement, the concept of "agencement" means "in connection with" in French (Deleuze and Guattari; 1988, in Gherardi; 2016) and while it has the same meaning of "arrangement" or "fixing" as in the English term assemblage, the French term "agencement" also denotes the processual nature of how the connections come together to form a fixing, rather than the arrangement itself as a final state of things, thus emphasizing the open-ended nature of the connecting process (Gherardi; 2016). This state of open-ended becoming of an agencement has indeterminate effects on the agencement itself, because of this state of indeterminacy, as the position of the elements of the practice is endlessly re-configured according to the logic of the rhizome (Gherardi; 2016).

Since it is the configuration of these elements' positions in the assemblage-agencement that gives them their properties, which are such only in virtue of the relational arrangement they are in with the other elements in the agencement, this theoretical concept thus jeopardizes the differences existing between structure, as it becomes a becoming process of "structuring", and agency, as an effect -and a cause - of a seamless restructuring of the positions of the human and nonhuman elements within an agencement. Agencement thus also points at how the interlinked elements acquire their agency, consequently to how they are positioned in that arrangement, by making agency come from this status of interconnectedness. Agency is a result of this process of connecting that is realized in that practice, it depends on these interconnections, thus is distributed among the elements of the practice and is not static – it is not a property of a single agent. Thinking about agency in these terms endows practices with a critical potential, because it decentres the source of agency from humans, as it makes possible to understand how agency is the outcome of this process of association, thus showing how a particular arrangement of sociomaterial elements as practice is agential as it enables – or disenables – agency to sociomaterial elements. The concept of agencement in this context implies therefore that agency is not a choice, but a practice, and this implies how agency is distributed in the elements of the practice, and the agency of every single actor depends on the other actors and their position in the agencement, instead of considering agency as an individual property (Gherardi; 2019).

Eventually, it can be said that thinking about practices as agencement (and also as formative, as it will be seen in the next paragraph) means passing from the noun "practice" to the verb "practicing", as a practice

becomes not an activity, but a process of endlessly changing interconnections, and agencement becomes the activity of creating such connections, with agency as the effect of such process. A practice therefore becomes agential in the context of a collective knowledgeable doing, as it reconnects the sociomaterial elements involved in it. Following a practice as agencement thus would mean following the process that allows the elements of a practice to become interconnected in that practice. How an agencement is formed in a practice depends on the concept of formativeness, which will now be analysed.

- <u>Formativeness: thinking critically about knowledge</u>

The concept of formativeness does not just define "a doing that while it does, it invents the way of doing itself" thus the creative entanglement of knowing and doing (Gherardi; 2016), but also a process in which doing and knowing are intertwined (Gherardi; 2019b, 2016) and it refers to how the object of a practice takes shape in a sociomaterial process of "forming". The "object of a practice" contrarily to the outcome of that practice, is the form in which the participants to a practice organizes the matter of the world (objects, artifacts, technologies) as an effect of their abilities to orient themselves in a context, which is dependent on a contingent ordering (Gherardi; 2017), and "forming" is doing and knowing how to do it together in a net of sociomaterial relations, as "being able to do" that comes from a trial and error process in which knowledge is produced in practices (Gherardi; 2017).

For this concept, Gherardi takes inspiration from Pareyson's aesthetics (Gherardi; 2016, 2017), that have inspired her own vision on organizational aesthetics. This aesthetic philosophy is interested in understanding aesthetics as production, not as contemplation, in which the form is a becoming and therefore the outcome of a forming process (Gherardi; 2019).

In this framework, the contribution of Pareyson's aesthetic philosophy to the study of practices comprises of three main topics:

- the concept of formativeness makes it possible to analyse and interpret how the object of practice acquires form;
- the idea of the inseparability of knowing and expressing supports an understanding of practice as collective tastemaking;
- the inseparability of knowing and sensing explains practice as grounded in sensible knowledge and therefore in the materiality of bodies that work.

(Gherardi; 2019)

The concept of formativeness is crucial for thinking about practices as "knowing-in-practice" in a posthumanist practice approach, because as it implies that practices continuously reinvent themselves

and what they produce in a contingent form of ordering, formativeness defines the co-constitution of what is known and how is known within a practice: this concept is important because it relates doing, knowing and inventing within a practice (Gherardi; 2016). Formativeness thus indicates the process of knowing and doing in a practice, it states that these elements are interrelated, as doing and a "way of doing" emerge together, and it establishes the idea that knowledge is not an object, but an activity situated in practices as a way of doing continuously reinvented, in a collective knowledgeable doing. Knowing is practical, and an activity that is the result of a trial-and-error process. This means that, as the becoming of a formativeness process shapes the agencement of a practice, the materiality embedded in this practice also contributes to the emergence of a new "way of doing" at the intersection between knowing and doing, thus creating new knowledge. As affects operates through the bodies, they contribute to the creation of knowledgeable bodies that can orient the practice, and affects can be considered as the "engine" or the "glue" that connects the elements of an agencement together, as they contribute to create the form of a practice. Formativeness thus is a concept that connects the turn to practice to the turn to affects, as relational affects as intensities contribute to the formativeness of practices as epistemologies (Gherardi; 2016).

The concept of formativeness has a critical potential, because as it implies how the role of materialities, bodies and affects also contributes to create a knowledge that is not cognitive, but embodied, it foregrounds the importance of taking into account the role of the researcher in the agencement of situated practices while studying them, thus its values and orientations, instead of framing practices as units of analysis for studying phenomena considered to exist "outside". Formativeness therefore hails to the assumption of an epistemology of practice that eschews the determinism of a cartesian epistemology and allows a posthumanist practice approach to be critical as it assumes knowledge as an endless sociomaterial accomplishment, rather than an object coming from a neutral reality studied by an apparently "objective" researcher.

- <u>Affects: thinking critically about affects</u>

There are many different theories of affects in organization studies: Deleuzian, feminist, psychoanalytic, bio-scientific (Fotaki et. Al; 2017). In the latest developments of practice studies, as it has been stated in the introduction chapter, a theoretical convergence occurred between the turn to practices in organization studies and the turn to affects in the search for a post-epistemology that decentres the role of the human actors by "linking the social and the natural, the mind and the body, the cognitive and the affective" (Gherardi; 2017). According to this convergence, affects and practices are co-constitutive, and therefore

Posthumanist Practices are affective, in a neo-Spinozist and Deleuzian way, and affects as "ordinary" affects (Gherardi; 2017) as theorised from a practice perspective are:

- Social, not subjective
- Activities, not properties
- States of physical arousal, of pleasures or displeasures, directed at some definite person, object or idea.

(Gherardi; 2017, Reckwitz; 2016)

In this approach to practices, affects are relational and processual, bodily intensities expressed in social practices; they are, according to Massumi, who is the scholar that provides the framework on affectivity assumed by a posthumanist practice, the "capacity to affect and to be affected" (Gherardi; 2017, Massumi; 2002) that sociomaterial elements acquire in virtue of their entering in relation within a practice. Because of their relational nature, Massumi (2002) in fact assumes affects to be always in "excess" of discourses and the body, as they are "in-between" them and, therefore, fundamentally impossible to represent in discursive practices. This "in-betweenness" is therefore the main characteristic of affects as "the capacity of affecting and being affected", according to Massumi, and this property makes them different than affects as emotions, because these are the description of a quality of an experience, the sociolinguistic fixing of the quality of that experience (2002). Thus, affects as emotions are individual feelings, defined in the realm of human cognition, rather than intensities that take place in the encounter between different human and nonhuman elements. This means that, far from any cognitive explanation of affects, for a posthumanist practice approach affects are movements between bodily states and intensities that this evokes, and they are in excess of discourses and representations (emotions) (Gherardi; 2019).

This characteristic of affects as "capacity to affect and to be affected" directed at humans and nonhumans thus implies their agency and sociomateriality, and they reshuffle the dialogue existing between mind and body, nature and culture, as it is sustained by authors such as Nigel Thrift (2008), who advanced the idea of affects as agents in the context of his non-representational epistemology (2008), Massumi (2002) and Braidotti (2013).

This is why affects in a posthumanist practice theory have a repercussion on the epistemology used to study these practices, and the subsequent move from an epistemology of possession to an epistemology of practice: in fact, the sociomateriality of affects in a posthumanist practice theory implies a focus on the body as a site and producer of knowledge, as affects concur to the displacement of the human mind in its role of knowledge producer-knower, by relocating knowledge creation instead in affective practices

(Gherardi; 2017). In fact, the concept of affects in a posthumanist practice-based approach specifically highlights how, at the intersection between the turn to practices and the turn to affect, it is necessary to rethink the role of the researcher in the situated and embodied knowing-in-practice and the search for a post-epistemology that overcomes the nature/social and the mind/body divides, thus decentring the human subject as an object of inquiry. This results in a search for new research methodologies (Gherardi; 2016, 2019 ,2017). As it will be now seen, this move entails a reconfiguration of the role of affects as critical tools.

In fact, new methodologies for the study of affect in a practice are necessary, because affects cannot be represented, they can only be evoked (Fotaki et. al.; 2017) by using techniques such as creative, non-representational writing (Gherardi; 2017). Representative methods of data analysis and reports are impossible in a posthumanist practice, because the presence of the researcher is part of the entanglement in the sociomaterial practices: the researcher becomes therefore an affect itself, and, as any other affect involved in the assemblage, it "affects and is affected" at a bodily level. This makes impossible studying practices from "outside", therefore from a position of externality, neutrality and reflexivity, according to Haraway's definition of objective knowledge as a "God Trick" (Gherardi; 2019). Thinking about affects in this way, with Deleuze and Spinoza, by assuming their sociomaterial nature and the post-epistemology that they imply, means therefore highlighting their critical power, because they evidence the political and ethical assumption of the researcher's epistemology: in fact, a relational view of affects highlights the social, political and ethical aspects of knowledge production, as the formation of this knowledge comes to depend not on the mind of the researcher as an entity capable to independently represent the social world, but on sociomaterial relations in practices. in fact, theories about affects as social agents are mostly advanced in fields such as feminist studies of organizations and critical theory, as a post-epistemology based on affects and sociomateriality contributes to disrupt the vision of Man as sole producer-knowing subject that comes from dialectic perspectives of the relationship between mind and body that is typical of the Cartesian/western tradition.

A posthumanist practice-based approach proposes a critical view of affect theory, that is in syntony with postcolonial, queer and feminist criticism of scientific management, yet eschewing the traditional limitations of these theories when it comes from moving to critiques of discourses to critiques of ontological power relations.

3.6. Summing up: A critical perspective on affects at the heart of a posthumanist approach to practices.

In conclusion to this section of this chapter, the latest developments in practice studies in MOS hint at the necessity of taking practices as epistemology for the next empirical studies of work and organizations, and the posthuman approach to practices advanced by Gherardi fulfils this need. By basing her approach on seven pillars – situatedness, knowing in practice, embodied and aesthetic knowing, technological, normative, discursive and social infrastructures –, which are the aspects of the practices that constitute a practice and, according to Gherardi, can be empirically investigated, she opens a new way of looking at practices that decentres the analytical focus from humans and their activities to the agential capability of practices to animate humans, nonhuman, technologies and discourses. As this agential capability is determined by how social and material elements are disposed within a practice according to the logic of the agencement, and by the intertwinement between knowing and doing that, as it progresses, invents the way of doing, thus giving form to that agencement in a process of formativeness, a posthuman approach to practices thus adopts this posthuman practical epistemology because of its relational views on materiality, and the consequences this ontological condition has for how knowledge is theorised in this approach. Knowledge, in fact, changes its status, from human property to activity situated in situated practices, and this foregrounds a shift in its nature, from cognitive to embodied and practical. Given the capacity of affects as intensities to be experienced as bodily feelings in excess of any representation, this means that a posthuman approach to practices assumes that affects can create knowledge in practices as "knowing in practice", and that posthuman practices are affective and creators of this situated knowledge.

In fact, as this approach shows how knowledge is embodied because of the sociomateriality of practices, it also shows the capacity of relational affects as intensities to create that knowledge, as these affects are realised at the encounter between the social and the material and the natural and the cultural. In fact, a posthuman practice emerges at the intersection between the turn to practices and the turn to affects (Gherardi; 2017), and draws on the three theoretical similarities between these two turns (previously exposed in the Introduction), in their search for a post-epistemology, in their interest for the body and embodied knowledge, and in their focus on sociomateriality, to state how affects can be studied empirically as their qualitative intensity circulates around a practice. This is the stance on affects assumed by this research project, as it wants to study how affects are creating a new form of value as they are changing working practices, as it departs from Gherardi's approach to practices as an empirical tool to track the emergence of affects as intensities in managerial settings.

Moreover, in the measure that a posthuman approach to practices is critical because it jeopardizes human conceptions of agency by relocating it within sociomaterial practices – and by doing this, it shows how a

practice is made by multiple social and material knowledgeable bodies -, it also implies a critical view of affects, as it expresses how the social, political and ethical aspects that contribute to form them in the agencement of a working practice has a potential to transform these practices, and the organizations. Specifically, according to the ethico-onto-epistemological positioning of this approach to practices, this happens as affects highlight how the epistemological position of the researcher, characterised by her/his own ethics and politics, is shaping the outcome of the research process.

For this reason, now I will address the literature on affects in MOS, which is the third literature interested by this review, by focusing on the studies that highlight the critical potential of affects for managerial practices and organizations.

4. CRITICAL PERSPECTIVES ON AFFECTS IN ORGANIZATIONS.

4.1. *What does a critical perspective on affects in organizations do?*

As previously stated, theorising affects as intensities that "sustains or preserves the connections between ideas, values and objects" (Ahmed; 2010) which are born at the encounter of bodies, thus as a bodily experience, means to acknowledge their critical potential (Gherardi; 2016, 2019). Yet, it remains the question of understanding what affects "do" when these bodies encounter each other, and the critical (as relational) theorization of affects investigates this field (Fotaki et al.; 2017).

Framing affects in this way means paying attention to experiences of bodily displacement, the movement between bodily intensities and the intensities that this evokes (Massumi; 2002). According to Fotaki et al., who in turn cite Deleuze, "this means considering the patterns or 'maps of intensity" that result – the rhythm of life that emerge and can become meaningful in their repetition" (Fotaki et al; 2017). This has the methodological implication that affects, as relational states of being, can only be evoked, and studies that try to analyse their later, discursive representations are unable to grasp their intensities (Fotaki et al.; 2017, Gherardi; 2019). In fact, affects as intensities are "in excess" of discursive representations, because they are related to aspects of bodily experiences that escapes the logic of language and brings us to unexpected places (Deleuze; 1997).

A critical perspective on affects as intensities in organizations tries to highlight how affects elucidate the ethical, political, and other elusive aspects of organizations, and the authors interested in this field try to investigate how affects can influence factors such as worker's motivations, political behaviours, or the relationships between leaders and followers (Fotaki et al.; 2017). In the case of this research project, this

wants to investigate how affects emerge as social investments, as these influence the creation of social networks that create value. The critical perspective of affects has contributed to inform some important works in the study of organizations, both empirically and theoretically: studies on affects and the psychosocial (Fotaki et al.; 2013); affective ontologies (Komporozos-Athanasiou et al.; 2014); affect, embodiment and diversity (Van den Brink et al.; 2016). As these works theorise in different fashions on the nature of affect, to situate this work in this literature I will now provide a brief excursus on these varied theoretical positions.

4.2. Critical theorizations of affects: a multitude of approaches.

The concept of affect has been differently theorised by schools of thought that share commonalities or contrasts in equal measure. Among the affect theories which mostly influenced the fields of work and organizational studies, it is possible to mention psychoanalysis, non-humanist philosophical traditions, the new vitalist strand in feminist theory, and affect theory proper (Fotaki et. al.; 2017).

The affect theory coming from psychoanalysis, tries to explain how affective impulses can have social implications (Fotaki et al.; 2017). This theory affirms that, regardless of our awareness of it, the presence of specific symbolic elements makes us psychically "invest" in them, and that these investments operate at the level of affects (Fotaki et al.; 2017). To cite one author in this field, Butler introduces the notion of power to help in understanding intersubjective affective dynamics, thus focusing on the relational aspects and social implications of affects (Butler; 1997). By introducing a power dimension in the concept of affects, this author improves our understanding of power in social life and demonstrates how affective investments links us to bigger social structures (Fotaki et al.; 2017).

The second strand of critical affect theory comes from non-humanist philosophical traditions, which are in contrast with the psychoanalytical school on affects. These focus on the links between "matter in flux" and "processual incorporeality" (Spinoza in Blackman; 2008). These theories see affects as "vectors" or "visceral forces" that operates through the bodies (Sedgwick & Frank; 1995) and take a less psychically based vision on affects. Massumi is an important author for this school (Fotaki et al.; 2017). In his view, affects are autonomous from the subject, automatic, reflexive, and relating to bodily capacities (Massumi; 1996). To explain the nature of affects, he refers to automatic bodily responses, that existed prior to the human subjects and in the realm of the virtual, both indeterminate and emergent (Massumi; 2010, Probyn; 2010). As example of how this theory has contributed to the critical studies of affects in MOS, Beyes & De Cock (2017) discuss colour-as-affect and its power in organizational life. The focus of the authors in

this field is on gaining a better understanding the nature of relationality, as they study the neurophysiological and psychological aspects of affect transmission that exceed a singular body (Blackman; 2008) and even though they do not dismiss the importance of studying the political and social aspects of affects emergence, their work is not explicitly centred around this theme.

The third approach is related to the second one in its Deleuzo-Spinozian view on affects, and it involves the "new vitalist" strand in feminist theory represented by the works of Braidotti & Grosz (Fotaki et al.; 2017). According to Braidotti, who takes inspiration from Deleuze's theorising on spatiality, subjectivity is a voracious desire for freedom that can only be realised through an endless becoming. Consequently, this creates potential for self-expression, co-constituted through relationships and configurations, and the capacity to affect and to be affected (Braidotti; 2006). Grosz (2004) follows down this line for her idea of subjectivity, by stating that the subject cannot be considered just culturally inscribed, to instead advance a problematization on the nature of bodies that could bring light on the characteristics of this nature, that makes such a cultural inscription possible (Grosz; 2004). Her work is related to evolutionary research, and she links the works of Darwin, Nietzsche and Bergson to theorise upon the existence of a "temporal becoming" (Grosz; 2004).

The last strand of critical affect theory relevant for MOS is affect theory proper, which recently has become interested in understanding how affects can have a transformative effect for the social world, as a strand in the theory emerged that emphasises "politically engaged work" (Seigworth & Gregg; 2010). This characterisation of affect theory came after receiving a heavy influence from feminist and queer theory, and this makes affect theory capable of detecting the material aspects of power, in contrast with other discursive oriented approaches, including the poststructuralist one (Fotaki et al.; 2017). To make an example, Sedgwick (2003) shows how the transformative potential of affects such as shame can be reworked to evoke pride. Affect theory has therefore the potential to bring deep innovations for critical organizational scholars – as this work also testifies, since this is the branch of affect studies in MOS that picks up.

To conclude, in its various strands, a critical theorisation on affects as a socially enacted entity that can put social actors in a new state of being, by destabilising them (Massumi; 1996), generates new trajectories of studies in the field of organizational scholarship, by promising new theoretical directions, methodological approaches, and the potential for critical investigations of work and organizations (Fotaki et al.; 2017). These directions of study will be now analysed.

4.3. Contributions of Affect theories in MOS: Theoretical, Methodological and Critical.

- Theoretical potential:

A critical perspective on affects posits that interrelated forces, embodied intensities that exist between the bodies connect humans (and, according to some theories, nonhumans) in ways that these cannot fully grasp, as these forces deliberately eschew the capacity of human minds to understand them. These forces, together with human minds and bodies, are responsible for the creation of social entities such as subjects and structures. Subsequently, applied to organization studies this view on affects proposes novel ways to theorise on the nature of organizations and its fundamental sociotechnical components as affect-laden.

To mention some of the works that have taken this affective turn to advance new theories in MOS, Brennan (2004) has taken this viewpoint to criticise how identities are still seen as autonomous and self-contained in identity studies; in the psychoanalytical field, many authors have begun already to study how affects can help us to understand better the nature of subjectivity (Clancy et al.; 2011, Fotaki et al.; 2012, Harding; 2007, Kenny; 2010) and psychosocial studies (Kenny & Fotaki; 2014). An offspring of the psychoanalytical tradition, the "psychosocial" school on affects helps to understand organizational phenomena in many different settings (Gabriel; 2014): for example, Fotaki uses this approach to show how affects create trust between patients and doctors and between patients and large institutions such as the NHS itself (Fotaki; 2014).

The presence of affects in organizations problematises the structuralist and poststructuralist theories on the structural nature of these organizations. According to Sedgwick (2003) affect theories helped to overcome the inherent pessimism of poststructuralism and its view of the subject as dominated by power. This view is shared also in the aforementioned work of Braidotti & Grosz, and in the attention that authors such as Kenny & Fotaki (2015) and Pullen & Rhodes (2015) give to the work of psychoanalytical scholar, feminist and artist Ettinger as they take her work into organizational studies to advance a new view on organizational ethics. Following down this line, Thanem & Wallenberg propose an embodied organizational ethics based on Spinoza's affective ethics (2015).

Furthermore, the research in this field highlights how affects can help to better represent organizations; as they help including in such descriptions the embodied element connected to life experiences, they also help to avoid describing them as fixed and static (Fotaki et al.; 2017). Examples of authors that embrace this affective way of representing organizations, and social life in general, are: Beyes & Steyaert (2012, 2013); Borch (2010); Hjorth & Pelzer (2007); O'Doherty (2008). Another strand of theorising stemming from critical affect theory in MOS is the one combining notions of the subconscious and bio-sciences. An example of works in this field is Barsade et al. (2009), which puts the notion of implicit affect in the

field of organizational behaviour. According to the authors, this change reflects the shift emerging from the "textual turn", towards an increased interest in the roles of affects and emotions as objects of inquiry, which is aimed at challenging the scientific superiority of "detached reason" over the "emotional and subjective".

Ultimately, theorising affects as intercorporeal and relational has also brought attention to the role of the body in organizations: Pullen & Rhodes offer an example of this, with their feminist view on the intercorporeal transmission of affects in organizations (Pullen & Rhodes; 2015). In their work, the authors argue that organizational scholars should consider the importance of affective experiences that are pre-reflexively communicated through the body, such as care and compassion, and how this foregrounds a revision of ethics in organizations as embodied (Pullen & Rhodes; 2015). Kenny & Fotaki (2015) answer to this call by drawing on the work of Ettinger and her concept of the matrixial borderspace, which foregrounds the material, affective and symbolic structures, as they bring this concept in organizational studies to put forward a theory of corporeal ethics in organization studies.

The field of affects and ethics continues to be understudied (Fotaki et al.; 2017). Now, I would like to point at how this work opens a way towards a contribution to this strand of literature, as a focus on posthuman practices allows not just to map power relations in organizations in a "cartography of power", to use the words of Braidotti (2013), but it also foregrounds a new empirical way of organising based on a "feminist" ethics of care, based on relationality and affects, rather than universal morals and recognition. Therefore, this work recognises the relationship between ethics and affects at the intersection between the turn to practices in MOS and the turn to affects in social sciences, and, as it studies how affects emerge in working practices, it proposes a methodology that acknowledges the power of affects to shed light on ethics and ethical issues as embodied in practices.

- <u>Methodological potential</u>

The concept of affect opens new avenues for thinking about research methods, as taking affects into account makes possible for the researcher to add another, affective dimension to the studies of organizational life, and provides their methodologies with new research tools. In fact, affective methodologies require the ability to be affected by the relational encounters, in the data collection stage of the research, and in the data analysis stage, the capacity for the researcher to evoke the affects by eschewing the pitfalls of representationalism (Sedgwick; 2003). This situation requires the researcher to experiment. In the field of organizational studies, authors have already explored the potential for affect to study work and organizations (Gabriel, 2014; Wood & Brown; 2011), and recently Gherardi offered

her approach to "Affective Ethnographies" as an example on how to experiment with affects in research settings (Gherardi; 2019); outside of the organizational field, scholars advance suggestions about how to discern affects in the observation of social life, such as "bloom spaces" (Stewart; 2010) or "ethical noticing" (Berlant; 2011).

- Critical potential

Affects offer different approaches to study organizations critically, work and their role in society: this characteristic of critical approaches to affect is, as previously shown, fundamental for the nature of this research project. Affect theory, for example, can help to understand the struggles workers face in the neoliberal condition, where insecurity and uncertainty dominate a day-to-day lifestyle of survival (Berlant; 2011); can shed light on how commodity are designed to include an affective dimension, to tie the consumer to the purchase and the usage of the product (Thrift; 2012), thus showing how neoliberal capitalism makes a profit of the bodily "excesses" produced by affects (Massumi; 2002). Related to this concept, some authors highlight how affects can help understand how spaces and atmospheres in organizations can be political in nature (Borch, 2010; Michels & Steyaert; 2017). Affects are very important in making us understand how imagination works through the constitution of dominant images and meanings related to organizational relations (Komporozos-Athanasiu & Fotaki; 2015) or by generating attachments to dominant narratives (Anderson; 1991, Fotaki; 2006); and they can influence, when emerging from political discourses, how the future of a country is perceived and how to respond to political oppositions (Kenny & Scriver; 2012).

Consequently to this role of affects in social life, these must be taken into account when proposing instances of social change, both empirical and theoretical: affects, in fact, can change how humans think, and they have a transformative power that can throw them into new states of being (Gherardi; 2017). This can potentially change power relations and forms of domination. By building on this line of inquiry, Probyn (2000) investigates the feeling of shame, and its effects on the experience for homophobia; race theorists such as Ahmed (2000) stress how embodied – thus, affective – experiences of exclusion open new ways to critique and challenge domination, as they show how communities can be built based on shared affective experiences.

In organization studies, affect theory has brought the potential to critically study labour and its organization. While authors like Clough et al. (2007b) argue in favour of a reframing of the measure and value of affective labour in contemporary capitalism, the work of Hardt & Negri (1999) and Lazzarato (1997) has made possible to study how affects are managed and produced in this economic system, and

how this is prompting transformations at a socioeconomic level, which requires political organizations of workers and their operations to change in order to retain their effectiveness. In this regard, what is relevant for this study is how Negri, Hardt and Lazzarato concluded that affects are changing the nature of value, as they are gradually substituting labour time as main resource needed for value creation, because the complexity of the networks created in the context of an Information Economy are making gradually impossible to measure value in terms of time (Negri & Hardt; 1999).

I will now describe in detail this theory, because it is the same theory that is shared by Arvidsson (2010) and Arvidsson & Peitersen (2013), on which I have based this research project. By answering to the author's call about the need to understand how affects as value emerge (are formed) in the creation of "intangible" resources (Arvidsson; 2012, Arvidsson & Colleoni; 2013, Arvidsson & Peitersen; 2013), this work wants to advance a new, post-capitalist, general measure of values as affects, in substitution of the contemporary one based on labour time. This would realise the vision that Arvidsson, by following Negri, had in regard of a potential post-capitalist future development for the global infrastructure of the Information Economy (Arvidsson; 2009, 2010).

4.4. *Arvidsson, Negri & Hardt: value as affect in Information Economy.*

In the value creation literature, there is a debate about how value is created in the context of online communities and digital technologies (Arvidsson; 2012, Mele et al.; 2018). Authors related to the Marxist tradition of political economy, that sees value as surplus value obtained from socially necessary labour time, and the Neoclassical schools of economics, for which value is determined by an interaction between the preferences and the productive abilities of the individuals share, from different positions, the idea that value is a relation between labour and time in the context of an activity executed by a single production unit. These authors are criticised as their ideas are deemed to be not suitable anymore for explaining how value is produced in the context of Information Economy (Arvidsson 2010). According to Negri (1999) these theories should be deemed obsolete because of two socioeconomic processes that are taking place in the contemporary global economy, the "becoming complex of labour" and the "becoming abstract of value".

- The concept of "becoming complex of labour", by departing from a Marxist prediction about the future developments of the organization of production in a capitalist economy, states that, as companies extend their interests in the market, it becomes necessary for them to increase the level of the division of labour to accommodate the needs of the market. Accordingly, the level of

cooperation needed increases up to the point that what becomes important in value creation processes is not labour anymore, but the capacity of establishing such forms of collaboration. According to Negri, this is exactly what happened with the post-Fordist revolution in industrial relations, where production, differently that in Fordism, relies on transnational networks rather than to individual productive units.

- The concept of "becoming abstract of value" states that, in concomitance with the process of "becoming complex of labour", a tendency that points towards the detachment of value production from direct firm production has taken place. According to Marx (in Arvidsson; 2012), value production happens as a direct commodity exchange in a market environment, where there is the possibility to link the commodity price to the labour time necessary for production. This form of value production cannot take place anymore in a finance-centred economic environment, as in this environment firms tend to accumulate value in the stock market, by granting themselves a financial rent based on intangible resources such as the potential for the company to be productive in the future (Arvidsson & Colleoni; 2012), rather than focusing only on the firm level of value production. Ultimately, value creation becomes increasingly detached from commodity exchange and production, to focus instead on sustaining of ever complex production networks – and this is where the "becoming complex of labour" tendency happens.

The realisation of these two processes sustains Arvidsson criticism towards labour-based theories of value. As stated in the introduction chapter, in Arvidsson's theorising about value creation dependent on Information technologies (2012), the major criticism to these theories of value gravitates around two concepts:

- The productivity of labour cannot be any more measured in terms of time quantitatively considered, as the complexity of the social networks, makes difficult to appoint to a particular productive unit a certain amount of labour executed;

- The realisation of value does not foresee the production and sale of any particular commodity, and social media enterprises realise value in virtue of the heavy influence that finance has in realising their capitalisation. Companies that have business models construed around information technologies and social media must not be considered in isolation, as the sole producer of their own wealth – the influence of finance and transnational firm networks must be considered central for this purpose.

Ultimately, Arvidsson sustains that in a global economy characterised by a hyper division of labour related to the influence of transnational connections, global finance and information technologies, labour cannot be commodified anymore in the subsumption process of surplus value creation, as it is not linkable anymore on single productive units and the resources necessary to realise such labour (the constant capital, in Marxian terms) become common (Arvidsson; 2010). Therefore, what becomes scarce in such a capitalist economy is not anymore the product itself, as the labour necessary to produce it becomes networked and, because of that, ideally unlimited, with obvious consequences for output capacities, but it is the capability to sustain and coordinate these production networks, so that the ensemble of knowledges and social relations that compose them, that Negri, following Marx, calls "General Intellect" can stabilise and create value (Arvidsson; 2010, 2012). Value creation becomes therefore reliant not on labour, but on the ability of workers and companies to create and sustain social relations (Benkler & Nissenbaum; 2006, Bauwens; 2009). To have such ability means that companies and workers must have the ability to create shared conventions (Negri & Hardt; 1999, Arvidsson; 2009) which in corporate language are called "intangibles" (Arvidsson; 2012), such as "Brand Value", capable of compacting such networks around the pursuit of a common objective, and to orient their action as a consequence: as explained in the introduction of this thesis, ultimately ethics become central for this purpose. Because of the central role that ethics have in the contemporary global economy, Arvidsson calls it "Ethical Economy" (2010). Conventions as "intangible" resources for value production become not just the tool through which working activities are oriented, but also the interpretative mean that allows economic actors to gather information about the value of those working activities; ultimately, they become central for value creation (Arvidsson; 2012).

In the context of the "Ethical Economy", affects have a central role in establishing the standards for such nets of stable relationships – the "intangibles". This is because these "intangibles" become such after an operation of objectification and rationalization of affects (Arvidsson; 2010) to optimise value creation: Arvidsson calls this process of objectification of affects "General Sentiment" (Arvidsson; 2012). Affects are "non-representational modes of thoughts" according to Deleuze (1978, in Arvidsson; 2012). To mention Deleuze himself (in Arvidsson; 2012):

"the idea is a mode of thought that is defined by its representational character. This already gives us a first point of departure in distinguishing idea and affect (affectus) because we call affect any mode of thought that does not represent anything. So what does this mean? Take at random what anybody would call affect or feeling, a hope for example, a pain, a love, this is not representational. There is an idea of the loved thing, to be sure, there is an idea

of something hoped for, but hope as such or love as such represents nothing, strictly nothing. Every mode of thought insofar as it is non-representational will be termed affect."

(Deleuze; 1978)

In the field of corporate value creation, "affects" are conceived as those feelings and emotions such as reputation and employee motivation that sustain the creation of these properties as valuable "intangible" assets for a company (Arvidsson & Peitersen; 2013). "Intangibles" are constructed by considering how affects, measured quantitatively thanks to data mining techniques such as network analysis in the creation of the "General Sentiment", influence the formation of their structure, thus influencing value creation. Ultimately, value and affect are related in this notion of "intangible" resources, and it is now possible to talk about value not as related to labour, but as related to affects: this is why it is possible now to refer to the existence of an "affective" value.

As stated before, the techniques used in the creation of the "General Sentiment" are purely quantitative: as a result, the "General Sentiment" operates an abstraction and objectification of affects (Arvidsson; 2012) that is not realised according to a common scale, but on multiple ones, such as "sentiment" or "network" analysis, which function by following different rationales (Arvidsson; 2013). Following Arvidsson, this research project supports the idea that, if there would be a technique capable of understanding how affects are formed, it would be possible to understand how to stabilize the creation of affective value, something that has so far being missing from the measurement of the intangibles (Arvidsson; 2012). This is the gap in the literature that this research aims to fulfil, by contributing to the Sociomateriality in IS literature and then to the Practices and their Epistemologies and Critical Perspectives on Affects in MOS as complementary fields of study.

After discussing the present literature, I will now advance the conclusions of this Review.

5. CONCLUSION: AIMS OF THE RESEARCH AND RESEARCH QUESTIONS.

5.1. *Summing up the calls in the literature.*

After analysing the literatures, it is evident how this work responds to multiple calls and, for this reason, it can be framed in multiple ways. Yet, this work also inserts into a main literature, while contributing to other two complementary ones. As said, the gap to which this work respond is in regard of the necessity to investigate how the affects that constitute value are formed in the context of the "Ethical Economy" (Arvidsson & Colleoni; 2012). As the emergence of this value is related to the sociotechnical process of change in digital working practices brought forward by digital technologies (and, on the other side, by

the processes of financialization, which study in this context remains available for another work), the main literature in which this work is inserted is the literature on Sociomateriality in IS (Cecez-Kecmanovic et al.; 2014). By studying affect emergence in digital working practices, this work responds to the call of scholars in Information Systems studies in relation to the absence of empirical works which employ a post-epistemology of practices to study the sociomateriality of IS. Because it provides such empirical example, this work also inserts in the broader literature of Practices Theories and their Epistemologies in MOS. In fact, as it inserts into the field of Sociomateriality in IS, it gives a contribute to the strand of sociomaterial thinking in the field that relates this sociotechnical phenomenon to IS practices in the philosophical context of Agential Realism, and in particular, in that perspective that considers practices as epistemologies, thus as the "situ" of the sociomaterial entanglement.

Thus, by responding to the nascent interest in the posthuman approaches to practices present in this second literature, this work provides an example of an empirical study of how affect emerges and circulates in practices, in the context of the contemporary posthumanist post-epistemological turn to practices, which interlinks the turn to practices in social sciences (and, consequently, in Management and Organization Studies) with the turn to affects in studies of emotions. Specifically, it provides an example of how affect is produced in mundane encounters in a working environment, a topic that is still underdeveloped in the literatures on practices and affects (Gherardi; 2017).

Ultimately, this research project also inserts in the nascent literature on critical affect studies in MOS (Fotaki et al.; 2017), which is the literature in which the gap this research answers to is mentioned. Critical views of affects in MOS, in its various strands, considers them as relational: this means that it studies how the social, political and ethical aspects that contribute to form them in their relations has the potential to change organizational phenomena (Fotaki et al.; 2017). As this work studies how digital technologies make affects emerge in working practices (thus contributing to the aforementioned literatures), in fact, it explores how the sociomateriality of these affects is changing established ways of working and, as a result, a new value related to affect is emerging. Because the various scholars (Negri, Hardt, Arvidsson, Peitersen & Colleoni) who have advanced this theory claims that it is necessary to study how these affects are formed, so that it will be possible to stabilise affects as a new measure of value in substitution of labour time, this work executes the former task, thus opening a way for the accomplishment of the second, by showing how critical affects emerge in digital working practices. (APPENDIX 3)

Now that I have exposed how this research project answers to the research gaps that I have found in the literature (the contributions it brings, though, does not stop here, as I will explain in the Discussion Chapter), I will now proceed in exposing the aims of the research and its research questions.

5.2. Aims, Value of the Research, and Research Questions in the light of this Literature Review.

To explain the aims of this research, it is necessary to briefly recall what value is for me and for this research project. In short, this project wants to think about value as "affective" and enacted in the sociomaterial agency of digital technologies, thus responding to Mele's call to assume a sociomaterial perspective when thinking about value co-creation (2018). In this work, value is not considered to be the outcome of a fixed pattern of working relations that happen between ontologically distinguished elements, yet is thought to be a sociomaterial, relational entity enacted in the affective performativity of a working practice considered as agential assemblage, in the framework of what Negri and Hardt call "affective labour" (1999), and according to Gherardi's practice-based theorising. This equals to thinking about value as the bodily intensity that is the result of a process of connecting between the various elements that contribute to shape a working practice.

In this context, the main aim of this research project is to track how affects, thus, value, emerge from the networks of sociomaterial relations to which they are related. This aim is also the main literature gap to which this work responds. This operation would have relevant repercussions for how we think about work and value, as it would make possible for us to understand how this value is formed. This would be the first step to take for a post-capitalist transition in the global economy, and, more specifically, to pave the way for creating post-capitalist business models that would account for value as a collective, rather than individual, entity - which is a secondary, and future, aim of this research. To understand how affects as value are formed is a precondition for a postcapitalist transition because, as Arvidsson claims, to understand how affects emerge is necessary for stabilising affects as a new measure of value, which is an avenue for new studies to which this work wants to provide a theoretical foundation.

In fact, as money, and not affect, constitutes the only measure – and deposit - of value in the neoclassical theory of postmodern capitalism that nowadays defines the notion of value, the labour necessary to maximise this value is still organised according to an utilitarian conception related to scientific management, which is, ultimately, what causes work to be commodified in the alienation process described, among the others, by Weber in his theory of disenchantment (Jenkins; 2000). To invent a common way to measure affective value instead of labour time would mean, eventually, to put the "social" - which includes social relations, ideas, representations, materialities and discourses involved in the working practice – at the centre of value creation, instead of the "individual" which is represented by labour time. This, therefore, would define a step towards a decommodification of work, as it would make

possible to link value production not to labour as individual practice, but to the sociomaterial context that allows affective labour to take place. Eventually this would make possible to implement a new, feminist ethics of care in business practices, opposed to the ethics of justice that have so far characterised the field, which are linked to the utilitarian mindset of universal reason characterising western epistemologies, because of the antiutilitarian flare constituted by considering posthuman working practices as epistemologies in working practices.

Moreover, in the context of the actual value crisis (Arvidsson & Peitersen; 2013), in which a common standard of value is lacking due to the influence of actors such as global finance and transnational networks, considering how to decommodify work could provide new ways to "renew" value, as it indicates a way to detach value from labour as an individual activity. In fact, the discrepancies between book value and market value of a company shows the progressive demise of the old methods of value measurement as the relationship between labour and value is modified by the presence of economic actors such as global finance and information technologies (Arvidsson; 2012, 2013), new value measurement methods are needed, which means that the old ideas about what economic value is, needs to be reworked, in my opinion. This work would like therefore to give a contribution in this sense. Thus, a new way to think about value creation could be helpful as way to rethink capitalism. In the context of the multiple global crises characterising the global society, including the climate crisis, which are requesting global economy to undergo deep structural changes (Adler; 2022), a reconfiguration of value measurement methods capable of reforming the present ideas about value could provide an important step towards reimagining the structure of the economic and social world.

In light of the aims of the research, and considering how the research inserts in the multiple points of entrance of the three literatures I have conjunctly treated in this chapter, I can now introduce the research questions that underpinned this study. These are:

- How is the sociomateriality of digital technologies changing the nature of value creation and thereby allowing the emergence of value as affect, thus of "intangible" resources?

- How are digital technologies changing working practices as they allow affects to emerge in the entangled intra/activity of human and nonhuman agencies?

Chapter 2. Research approach

1. INTRODUCTION

1.1. Research Methodology and Strategy: summary

To produce this research, I adopted Barad's Agential Realist philosophy (2007, 2014), as it is the onto-epistemological approach sustaining Gherardi's approach to practices (Gherardi; 2019). Given its relational stance on sociomateriality, this framework posits a post-epistemology focused on social production, rather than reflection; thus, for this research I adopted an abductive research sensibility, which allowed me to "re-produce" the affects present in the dataset, given its iterative character. To do this, I adopted a post-qualitative research methodology focused on the embodied experience of affects, thus on embodiment (Gherardi; 2017); with my affective, embodied presence in the field I thus experienced these affects circulating around working practices, with an operation of Affective Attunement to the Affective Atmospheres generated by those affects, through an operation of "Worlding" (Stewart; 2007), which I operated during my data collection stage (Gherardi; 2017b).

For the research strategy, as data collection tools, I used focused performative, reflexive interviews based on Willink & Shukri framework (2018), both online and in person, and other secondary sources such as pictures of the working places and the video/audio recordings of the same interviews. To keep me maintain reflexivity, I also compiled a short research diary to help me re-evoke the most meaningful affective events, which I used both during the data collection and analysis stages. For the data analysis stage, I adopted a Reflexive Thematic Analysis (Braun & Clarke; 2022) informed by an affective sensibility (Willink & Shukri; 2018), which allowed me to feel the affective atmospheres of the practices again through the codes and the themes. Eventually, I produced my report in the Findings Chapter by performing again "worlding" through non-representational writing.

1.2. Ontology and Epistemology: Barad's Agential Realism.

To justify the research strategy of this research project I will now investigate its ontological and epistemological position, which comes from an ethico-onto-epistemology called Agential Realism (Barad; 2003, 2007). By doing this, I will clarify the rationale underpinning the adoption of the data collection and analysis tools I have chosen for this work.

Agential Realism is an account of technoscientific practices of knowledge production that unifies the tenets of Bohr's Quantum Physics to those of fields such as poststructuralism, feminism, antiracism,

Marxism and Queer studies, to theorise a materialist and posthumanist notion of performativity (a philosophical position that criticises the representationalism of Cartesian – derived social theories, to imply instead the active agency of materiality in the constitution of reality) which implies a revision of common assumptions on ideas of discursive practices, causality, agency and identity among the others (Barad; 2007). In an Agential Realist metaphysics, a relational ontology is foregrounded, which rejects the notion of relations between "words" and "things" in which these entities are predefined (Barad; 2003). In Bohr's Quantum Physics, "things" such as atoms are not ontologically defined entities, they do not have autonomously defined boundaries or properties, and the same is applied for "words", which are entities with no predetermined meanings (Barad; 2007). This position implies a rejection of both Newtonian Physics and Cartesian representational epistemology based on the triadic structure between words, things, and knowers, as Bohr himself calls into question the Cartesian separation between object and subject, knower and known (Barad; 2003). In this context, Bohr found a new, non-representational way, to produce objective knowledge, yet his work mainly focused on the epistemological consequences of this move; Barad instead, with their philosophy, takes those insights further, into the development of a new ontological model for posthuman performativity. In the Agential Realist account that explain this model, Barad refuses in fact the separation between words and things, to advocate for a "causal relationship between specific exclusionary practices embodied as specific material configurations of the world (i.e., discursive practices/(con)figurations rather than 'words') and specific material phenomena (i.e., relations rather than 'things')". (Barad; 2003). This causal relationship between the apparatuses and phenomena is called "agential intra/action", and it is the framework for posthuman performativity which lies at the foundation of Barad's feminist materialist philosophy, and of this research project.

To describe this condition, according to Bohr, the primary epistemological unit - the tools that allow us to create knowledge – are not independent objects with inherent properties, but are entities called "phenomena" which marks the inseparability between the object under study and the epistemic tools (Barad; 2003). By taking inspiration from this definition, Barad acknowledges that in Agential Realism phenomena does not just mark that inseparability but are the "ontological inseparability of agentially intra-acting components" (Barad; 2003): phenomena thus become relations that give ontological status to the entities involved in it (Barad; 2007). In this context, the notion of "intra-action" marks a distance from the notion of "interaction" typical of Cartesian and social constructionist epistemologies, as it indicates how different entities are mutually defined in their relations, rather than existing prior to them (Barad; 2003). Moreover, a specific "intra-action" enacts the emergence of involved entities through an "agential cut", which is the epistemic practice that puts into effect a localised differentiation between

"subject" and "object" within the phenomena: intra-actions through agential cuts thus enacts "agential separability" as the condition of "exteriority within phenomena" (Barad; 2003). Moreover, an agential cut enables a situated relation of causality between elements of a phenomenon, as the "measured object" intra-acts, thus contributes to define, the "measuring agencies": for this reason, "the notion of intra-action constitutes a reworking of the traditional notion of causality" (Barad; 2003). In this context of intra-action, phenomena are thus produced by static epistemic arrangements, but by "apparatuses" as "dynamic (re)configurings of the world, specific agential practices/ intra-actions/performances through which specific exclusionary boundaries are enacted", which are open-ended practices that are phenomena in themselves, with no inherent external boundary, as this boundary is constantly reworked in the intra-activity of the apparatus itself (Barad; 2007). This represents a substantial shift from traditional, representational epistemologies: in this context, epistemologies do not "reflect" reality but "produce" it, according to the particle physics of diffraction. "Diffraction" is thus the metaphor coming from the world of physics that indicates the process in which reality is produced in agential intra-activities. As light does not go unchanged through a prism, also reality and knowledge are produced in the intra-activity between material and discursive configurations, thus an epistemology of "diffraction" does not stand for a passive registration of an external reality, but it is about actively engaging with the world (Barad; 2007).

In this onto-epistemological framework, the attention thus passes from the power of language to interpret worlds, to the agential capacity of specific apparatuses as material/discursive configurations in localised relations in practices to produce the world, as these practices ontologises its components in their iterative intra-activity. These determining practices, that in a Foucauldian framework are called "discursive" practices after their relation to language (Foucault; 1970), in an Agential Realist account are instead also material, because they are included in the intra-activity that ontologises phenomena: the apparatuses are thus material/discursive in nature, and "Material-discursive practices are specific iterative enactments – agential intra-actions – through which matter is differentially engaged and articulated (in the emergence of boundaries and meanings), reconfiguring the material-discursive field of possibilities in the iterative dynamics of intra-activity that is agency" (Barad; 2003). Here, human and nonhumans have no inherent substance, but are locally materialised as the result of specific intra-activity: therefore, they "are" not, as what they "are" is what they "do" in intra-action; the result of this is that an Agential Realist version of subjectivity, human and nonhuman, relates it to agency, as bodies become material-discursive phenomena (Barad; 2003). Agency is thus not a capacity pertaining to human or nonhuman individuals, but it is "the enactment of iterative changes to particular practices through the dynamics of intra-activity" (Barad; 2003).

The performativity of the material/discursive entanglement has important ethical repercussions. In fact, in this framework ethics are not about the ability of making moral, rational choices which are universally valid, but they emerge through intra-actions in material/discursive practices, as every agential cut is ethical in itself, as it shapes the world from a determined situated location (Hinton; 2013). Ethics becomes therefore a matter of "response-ability" as the capacity of being accountable for the agential boundaries we create - thus for the possibilities that we shape.

According to this framework, that Barad calls "ethico-onto-epistemology" (Barad; 2007), affects are thus the product of this intra-activity in material/discursive practices. Now I will expose how I studied their emergence in posthuman digital working practices.

2. METHODOLOGY.

2.1. Methodology Strategy.

To reach its objectives, this research wants to show how affects emerge and circulate in and out of a practice and, by doing this, collate all the elements of the practice together, by making these practices constantly change.

Given its diffractive post-epistemology, it is thus necessary to understand how this research project proposes to enact these affects as they emerge in a sociomaterial practice on an empirical level, to be able to analyse - thus to know - them. To introduce how I did this, the performativity of the research apparatus implied by this project required me to pay attention to how affects are manifested on my body-mind, as my affective presence intra/acted on the studied field together with my methods of data collection and data analysis, to understand how the affective sociomateriality of digital technologies is changing the nature of labour and economic value production. I did this as I was paying attention at how affects were creating atmospheres as aesthetic experiences in working practices, while I was writing my data report. In fact, studying affects (as ordinary affects, as it will be seen later) in working practices implies, according to Gherardi (2017), an analytical attention to how affects creates atmospheres as "worlding" (another term that will be explained in this chapter), with this analytic attention implying a "search in noticing and writing in a non-representational language, in what Thrift has named the geography of what happens, and it is therefore "a work of description of the bare bones of actual occasions" (Gherardi; 2017). This analytic attention ultimately focuses "on how life takes shape and gains expression in shared experiences, everyday routines, fleeting encounters, embodied movements, precognitive triggers, practical skills,

affective intensities, enduring urges, unexceptional interactions and sensuous dispositions' (Gherardi; 2017), while searching for a language capable to go out of the schemes to communicate affectivity.

To explain why I adopted this methodological strategy, I must first explore which kind of knowledge I produced with this research. Given that in a sociomaterial environment also the natural and the cultural are entwined, this means that knowledge is created at the intersection between body and mind, thus also through the body. Consequently, embodied experience becomes crucial for this research project, and knowledge creation as the end of this research work turns into an endeavour dependent on sensible experience. I will now introduce the concept of embodiment, to show how this relates to the analysis of affective experiences.

2.2. *Embodiment from a Posthumanist Perspective: a transcorporeal perspective on Knowledge Creation.*

For Gherardi, embodiment refers to how knowledge is created at the intersection between mind and body, thus also through the body, as it emerges from sociomaterial practices (Gherardi; 2019). It is a concept mainly used in the phenomenological tradition of social studies, but Gherardi updated it in the light of posthumanism, in a way that made it relevant for this research project. For the ends of this chapter, it is therefore fundamental to explain this shift, which refers to a pass from a conception of embodiment as "intercorporeality" to a one as "transcorporeality" so that I will be able to explain its relevance for my research strategy.

In few words, the two definitions differ in their theorization of the "in-betweenness" between the social and material bodies as the "capacity to act and be acted upon" (Seigworth & Gregg; 2010), which is therefore the mode in which affects emerge, circulate, affect and are affected by the practice elements, thus the practice itself, according to the relational ontology of "becoming" implied by this research project. It is thanks to this notion of "in-betweenness" that it is possible to know, as detect and analyse, affects as feelings related to bodily intensities, as postulated by this research project. Thus, "in-betweenness" as a state of being is how embodiment as a practice of knowledge production in research practices happens. In the context of the theoretical framework on posthuman practices as "knowing-in-practice" that I adopted for this work, the term assumes a specific connotation, due to its relational ontology of intra-activity. To explain this, I will now introduce the meaning that this term has for a school of thought different than posthumanism, so that eventually this term will be easier to understand, by making a comparison between these two definitions. In the phenomenological tradition "in-betweenness" is referred to as "intercorporeality" (Merleau-Ponty; 2012), which "is conceived as the basis

of embodied knowledge as an alternative source of social cognition focusing on the experience of one's own body and that of the other" (Gherardi et al.; 2016). Thus, in this tradition, embodiment is both corporeal and social, but in the context of social cognition: "intercorporeality" thus here indicates the interrelatedness between "pre-personal, personal and interpersonal dimensions of sensemaking" (Gherardi et al.; 2016). Instead, in the context of new materialist and posthumanist philosophies, the nature of "in-betweenness" and embodiment relies on the concept of "transcorporeality". According to Alaimo (2010), this term refers to a way to conceive the human body as always interconnected with the flow of agencies and substances that surrounds it. This adds to the notion of "intercorporeality" the idea that the knower is not separated from the context, as it is postulated by the social cognitivism of the phenomenological position, but that its embodiment, instead, is dependent on a "unbounded, bodily embeddedness in the material, earthly environment (which is therefore not separated from the knower)" (Lykke; 2009 in Gherardi et al.; 2016). Given its processual nature, this notion of embodiment therefore is akin to the concept of practices as agencement of social and material elements, and for this reason, transcorporeality constitutes the epistemological foundation of the methodology I have chosen for this research project.

Thus, a study on the emergence of affectivity such as this one, needs to be attentive to the embedded and embodied experiences of affectivity residing not just in the bodies, as it is taught in the phenomenological tradition, but in the sociomaterial processes that constitute the working practices. Thus, its analytical framework, with its methodologies of data collection, must be able to embrace embodiment, the body and bodily feelings in their social dimension. Consequently, as the study of embodiment for this research project implies departing from a philosophical condition in which the division between nature and culture is surpassed, this supports the idea that the data collection and data analysis tools must be conceived outside of their traditional role and rethought to allow a meaningful study of affectivity as a transcorporeal, embodied state of being. Because of "trans-corporeality", embodiment as the capacity to evoke and re-present affects is therefore at the centre of the research strategy of this work. But why a methodological sensibility founded on embodiment is useful in the context of a research on relational affects in shifting digital working practices and economic value? To better understand this, we need to introduce now the concept of embodiment at large.

In a posthumanist approach to practices, knowledge becomes embodied and realised at the intersection between body and mind, thus between nature and culture, as the two turns in which this approach to practices is found share the same attention for the search for a post-epistemology, for embodiment and embodied knowledge, and for sociomateriality (Gherardi; 2017b). To explain this shift in knowledge that

puts embodied experience at the centre of the attention, in the context of a posthuman post-epistemology of practices the attention is decentred from the human subject as producer of knowledge, to the performativity of sociomaterial practices as immanent becoming, with this "becoming" in practices that becomes therefore the focus of analysis for the studies of the sociomateriality of working practices (Gherardi; 2017b, 2019). In this context, affects become capable of producing embodied experiences, thus knowledge, because they are relational and sociomaterial, thus enacted also by nonhuman agents (Gherardi; 2019b). This means that affects as sociomaterial, relational processes in practices, because they are not just an ingredient of a practice, but instead contribute to its co-creation, contribute to form that embodied knowledge which is at the centre of the posthumanist epistemology of practices embraced by this research project.

In fact, as affects and practices are co-constitutive (Reckwitz; 2016, Gherardi; 2017b), the research practices of data analysis and collection that are part of the agencement constituting the researched field, can be considered as enactors of embodied knowledge in practices, as affects circulates in and out them. Thus, as mentioned previously, to analyse affects in working practices means to pay attention at reporting them in a more-than-representational writing, through an operation of attuning to those affects in practices through the writing (Gherardi; 2017b). Ultimately, as the posthuman practices of research intra/act with the working practices under study, these allow the affects emerging in such intra/activity to resonate in the body of the researcher, thus allowing the researcher to study those practices as the sites of affects as intensities because of their performativity, which is productive of embodied knowledge. According to the ethico-onto-epistemological approach of this research, in fact, as affects are enacted as specific agential cuts perpetrated by agential material-discursive practices, they co-materialise bodies, technologies, discourses and feelings, as they become part of the agential intra/activity enacted by material/discursive epistemic practices (Barad; 2003).

Now that it has been established how the materiality of affects (thus, the agency of digital technologies) can be studied in the becoming of working practices thanks to embodiment as a way to experience "in-betwenness" as transcorporeality in the intra-activity of the sociomaterial elements in those practices, for the ends of this part of the Thesis it remains the question of giving more details at how a digital technology can influence the emergence of these affects from an empirical perspective, thus how it is possible to report and analyse affects in working practices, by preserving those affects in the research practices of data analysis and collection. In the next paragraph, I will explain how this operation depends on an "affective attunement" to the "ordinary affects" in the "affective atmospheres" of the working

practices that is performed by the researcher, in its non-representational (or more-than-representational) writing in the data report.

2.3. Studying the sociomateriality of affects in working practices: Affective Atmospheres and Affects as Ordinary Affects.

To explain this, it is necessary to recall how in a posthumanist theory of practices, affects are discursive and material when included in a practice; this means that affects are included in the materialities present in the practices of the research assemblage under study, because of their sociomateriality. Consequently, the role of materialities such as spaces and objects as affective agents can be studied by considering affects as integral parts of the practices, therefore as the practices themselves. As I will now explain, the sociomateriality of affects, thus the materialities present in the practices, form and orient the working practice as these contribute to constitute the affective atmosphere of the practice. In fact, according to Gherardi, atmospheres are " a good example of a pre-personal and social affect and it easily illustrates the feeling of "intensity" that a practice may assume for its practitioners and for the researcher participating in its study" (Gherardi; 2017b), and therefore are suitable to show the kind of affective intensities prompted in assemblages in practices in which non and more-than-human agents participate.

To explain how affects and atmospheres relate to each other in working practices, Gherardi starts exposing this with Reckwitz, as his theorising helps to understand how to locate affects in relation to practice-based studies (2016). In his 2016 paper, Reckwitz states how practice theory and affect analysis are two fields that should be put in relation to each other, because "if the affective turn is about overcoming the culture/material dualism in the understanding of feelings and practice theory seeks to overcome this dualism in general, then a specifically practice theoretical approach to affects seems promising" (Reckwitz; 2016). By affirming this, Reckwitz supports the idea that affects are both cultural and material, thus enacted by the agency of the nonhuman, and that affects can be studied not just as ingredients of practices, but as the practices themselves, as "*every* (cursive in the text) social order as a set of practices *is* a specific order of affects" (Reckwitz; 2016). By integrating practices and affects because of their mutual criticism of the nature/culture dualism, Reckwitz therefore concludes that a practice perspective on affects assumes that these are:

- Not subjective, but social;
- Not properties, but activities;

- States of physical arousal, of pleasure or displeasure, directed at some definite person, object or idea.

(Reckwitz; 2016)

A practice perspective on affects thus takes these out of the realm of cognition and the human mind, to put them instead at the level of practices themselves: in this way, affects are considered "ingredients of a practice, as properties of the specific "attunement" or mood of the respective practice"(Reckwitz; 2016), and are constitutive elements of a practice: this is the reason why affects and practices can be considered the same. To better explain the epistemological consequences of this move, and thus the relationship existing between practices, affects and atmospheres, Gherardi deepens this analysis with her appreciation (already exposed in the introduction of this Thesis) of the three commonalities between the turn to practices and the turn to affects, and comes to the conclusion that, in the becoming of a posthuman practice, affects are embedded in the material world, and since for her atmospheres are a form of affect, materialities express affectivity through atmospheres when these entities are included in the context of posthuman working practices (Gherardi; 2017b). Eventually, this consideration prepares the stage for the advancement of an affective empirical methodology for studying how the materiality of the nonhuman, including objects, spaces and technology participates to the emergence of affects, in the form of affective atmospheres, as constituent elements of sociomaterial practices, by "safeguarding" them as they pass through the research apparatus (Reckwitz; 2016, Gherardi; 2017b).

To give further detail to the relationship between affects and atmospheres in working practices, it is necessary to introduce the notion of affects as "ordinary" affects, which is given by Stewart (Stewart; 2007, pg.4). She defines them as:

"The varied, surging capacities to affect and to be affected that give everyday life the quality of a continual motion of relations, scenes, contingencies and emergences. They're things that happen."
 (Stewart; 2007, pg. 4)

According to Gherardi, who takes this definition from Stewart, this definition of affects aptly describes how affects in a posthuman practice are important not because they represent something, but because they generate intensities and feelings related to them that could not exist otherwise (Gherardi; 2017b). Because their meaning cannot be encapsulated, ordinary affects can therefore open new, unexpected ways of thinking and attending to the formation of reality: the question thus goes from what affects are, to "where they might go" (Gherardi; 2017b). Because of their rhizomatic nature, Gherardi deems this framework of affects as the most suited to explain how affects are included in the intra/active

sociomateriality of a working practice; consequently, Gherardi suggests that affects in working practices should be studied as "ordinary" ones (Gherardi; 2019). Thus, the concept of "ordinary" affects, for Gherardi, is the most suitable to describe affects as sociomaterial and the feelings that this inspires. For this reason, I take this stance on affects in this research project, to help me with my methodological choices. It remains the question of understanding how these affects can be analysed in the context of the assemblage of the practitioners' and researchers' sociomaterial practices. Gherardi assumes that, to understand this, it is necessary to delve in the concept of atmospheres as affective atmospheres.

In fact, for Gherardi materialities acquire such affectivities in practices as ordinary affects through affective atmospheres, as materialities embed these atmospheres (2017b). To explain what these atmospheres are, so to highlight why they can be classified as a form of "ordinary" affect, Gherardi mentions Brennan (2004), who states how affective atmospheres are the:

"shared ground from which affects emerge"
(Brennan; 2004)

They constitute a bodily aesthetic experience which cuts across the formations and the undoing, of subjects, objects, relationships, discourses and materialities, in a transversal process that wraps all these elements together within a sociomaterial assemblage. Therefore, they "surround people, things and environments: by entering a room, one can fell a tense or serene atmosphere" (Anderson; 2009). Thus, they are a transcorporeal aesthetic experience related to an ambient within a practice and are sensed through the body (Strati; 2009, Moriceau; 2016). Because these atmospheres are relational, non-representational and environmental, they can be embedded and enacted by materialities, including spaces and technologies, as these elements enters the agential intra/activity of the material/discursive elements of a posthuman practice. Because they share a common nature, these atmospheres can be formed by "ordinary" affects (thus becoming these atmospheres affects in themselves), as "ordinary" affects can be considered responsible for how these atmospheres are lived and circulated, thus, formed (Gherardi; 2017b). By building on this definition, Gherardi eventually affirms that studying atmospheres is a remarkable way to study the affectivity of working practices as "ordinary" affects, and thus, how affects are also generated by the agency of the nonhuman (Gherardi; 2016).

For this reason, this research project proposes to study these affective atmospheres as they surround working practices, to track the emergence of ordinary affects while they make these posthuman practices (and economic value) change. It remains now the question of describing the research strategy that allowed me to study these atmospheres in practices by performing (or, re-producing) them in my data collection

and data analysis, according to a post-epistemology based on diffractions and intra-actions that puts at the centre embodiment and embodied experience as site of knowledge production. This question will be now addressed.

2.4. Empirical Research on ordinary affects. The importance of Atmospheres: Kathleen Stewart's "Worlding" and "Affective Attunement" on ordinary affects.

As noted previously, there is a deep relationship between the concepts of ordinary affects which Gherardi uses to give a narrower definition of affects, easier to process for the ends of empirical research - and affective atmospheres, as the firsts are found in the second (Stewart; 2011). To note ordinary affects, a researcher must sense how these affects in a working practice contribute to create a sensible atmosphere, or, in other words, partake in an operation of "worlding" with their research practices (Gherardi; 2017b). "Worlding" is a word that has been first used by Heidegger (1962), and it refers to the continuous recreation of different social contexts caused by having various subjects living in them (Gherardi; 2017b). Ordinary affects are therefore responsible for "worlding" or the crafting of various worlds because with their flow, they influence the intensities of feelings embedded in affective atmospheres that contribute to create the situated reality we live in, with which we intra/act at the intersection of our bodies and minds. A consequence of this situation is that, to study how ordinary affects create an atmosphere, the researcher must avoid executing the analysis in representational and causal terms, because of their relational nature that requires the adoption of a post-epistemological stance in knowledge production. Thus, to participate meaningfully in the "worlding" it becomes crucial the ability of the researcher to search and note in a non-representational language, in what Thrift (2007) describes as "a work of description of the bare bones of actual occasions", in the context of a "geography of what happens" (Thrift; 2007). To realise this sensibility, Gherardi mentions Stewart (2011) to highlight how an operation of "affective attunement" to a specific atmosphere in a working practice, becomes crucial to attend to how ordinary affects emerge in a posthumanist working practice (Gherardi; 2017b). As it will be now seen, "affective attunement" is therefore a process of "worlding" (Stewart; 2011) that happens in the researcher's practices and especially in their writing and requires the researcher to report the outcomes of the research in a non-representational fashion, as these outcomes are themselves productive of the ordinary affects under examination.

To explain how "worlding" and "affective attunement" can be empirically used in research practices, Gherardi references the work of Kathleen Stewart (2007, 2011) when she defines what "worlding" is in

regard of how the intensities of ordinary affects shapes an affective atmosphere, and to indicate what "affective attunement" means (2017). For Kathleen Stewart (2011), "affective attunement" is a way to dwell an affective world, therefore "worldings" come from atmospheric attunements in research practices and non-representational writing, because sensing an atmosphere as a sociomaterial, affective research practice intra/acts with the same affective atmosphere, thus contributing to its emergence. An affective atmosphere thus could not exist outside of the presence of the researcher in it (Stewart; 2007).

To further explain the empirical implications of this operation, especially in regard of the non-representational writing needed to perform it, the body of the researcher becomes central in the operation of "affective attunement" to sense an affective atmosphere in a posthuman working practice, as this body participates in the intra/actions of the agential assemblage that constitutes that affective atmosphere. For this reason, the operations of data collection and data analysis as affects enacted by the researcher, become involved in that sociomaterial assemblage as they are affects in themselves included in that practice, and therefore it is not because of, but "through" these tools that the researcher can analyse affects by "evoking" and "re-producing" them, thus participating in their active constitution, rather than studying them from a position of independency and autonomy in respect to the research field in which they emerge.

Writing, both in the data collection and data analysis stages, becomes therefore fundamental for the operation of "affective attunement", as the attunement is done through writing, and those research stages become part of that practice of sensing, thus of noting and analysing ordinary affects and should avoid any form of representationalism. To describe how writing should be done to efficiently attune to ordinary affects in a working practice, Lorimer (2005) describes it in this fashion:

"The focus falls on how life takes shape and gains expression in shared experiences, everyday routines, fleeting encounters, embodied movements, precognitive triggers, practical skills, affective intensities, enduring urges, unexceptional interactions and sensuous dispositions."
(Lorimer; 2005)

To correctly execute this task, the researcher needs to write in a non-representational fashion in the data report stage of the research; this implies an ability to develop a narrative capable of following life "as it happens", so that it will be possible not to represent, but to evoke the affects that were allowing the studied "world" to spawn, in and out from the researcher's body (Gibbs; 2016). "Affective attunement" can be, in last instance, defined as a form of performative and diffractive writing, aimed at evoking affects as intensities in the intra/acting stages of data collection, data analysis and data report of the research.

"Affective Attunement" is thus an embodied practice of presence realised through non-representational writing, which requires the researcher to pay attention at how the ordinary affects contained in a practice contribute to shape an affective atmosphere (Gibbs; 2016, Stewart; 2011, Willink & Shukri; 2018). It is a sensorial practice of detection that, by focusing on the researcher capability to affect and be affected, requires them to be able to sense the aesthetics of a practice as an embodied state of being, and to feel the non-representational as it happens in between human and nonhuman bodies, namely in their intra-activity (Gibbs; 2016).

2.5 Non-representational writing as affective methodology: affective resonances, rhythms, intensities as carriers of ordinary affects in a posthuman working practice.

As previously stated, to realize "worlding" through the affective attunement to a determined atmosphere means to follow how the intensities of ordinary affects shape an affective atmosphere, in "a work of description of the bare bones of actual occasions", in the context of a "geography of what happens" (Thrift; 2007). It remains the question of understanding how these affective intensities manifest themselves, to realise a proper research strategy (both in the data collection and analysis stages) capable to noting them in a non-representational fashion. To execute this task in non-representational writing, the concepts of affective resonances, rhythms and intensities of an affective encounter are helpful, as these are affective expressions that once detected through an affective attunement, provide the tools to detect through the body, therefore, to re-produce, ordinary affects as intensities in working practices (Willink & Shukri; 2018).

In fact, affective attunement can re-produce ordinary affects in a writing practice in their resonances, rhythms and intensities, and detect how these contribute to create an affective atmosphere in specific environments as it is created by the "worlding" evoked by the researcher, and envelops the intra-actions of a determined sociomaterial assemblage. Affective resonances, rhythms and intensities, in fact, can define and change an atmosphere as a feeling, a gesture, a particular word said at the right moment in a working practice can change that affective atmosphere, and their presence as modes of affectivity makes possible for the researcher their detection, that would be otherwise difficult considering that affects are fluxes always in motion (Gibbs; 2016, Willink, Shukri; 2018).

Writing in a non-representational fashion entails a sensibility towards these forms of ordinary affects, capable of making these resonate in the bodies of the readers as they did in the body of the researcher.

Finding affective resonances, rhythms and intensities through the writing, means to achieve a form of writing that evokes the affective atmospheres of a posthuman practice. These modes of expression of ordinary affects are carriers of affectivity in a posthuman practice as they characterise the affective narrative of the non-representational writing. Non-representational writing is therefore crucial to understand how rhythms, resonances and intensities are embedded in the affectivity of a practice as it allows the researcher to "attune" to the atmosphere and create "worlding".

To better understand the significance of these terms it is necessary introduce the concept of "forms of vitality" to characterise the form of distributed agency of ordinary affects as capacity to affect and be affected. According to Daniel Stern (2010), affects are contoured by "forms of vitality". These "forms", according to Gibbs (2016), are:

"Patterns of expressive movement or gestalts which are composed of movement, time, force, space, and directionality or intent or tendency but are always grasped as a whole."
(Gibbs; 2016)

"Forms of vitality" can be defined as "contours" of affects, otherwise as affective carriers of ordinary affects as "public feelings", which are characterised by constant motion and different intensities (Stern; 2010). The point is that by considering the agential characteristic of ordinary affects as "forms of vitality", this provides us with a vocabulary that makes possible to fix and detect these feelings in a practice of non-representational writing. In fact, it is by considering how affective resonances, rhythms and intensities are constructed as "forms of vitality" that it is possible to analyse ordinary affects in writing: these manifestations are, therefore, what is performatively analysed in an activity of non-representational writing.

3. RESEARCH STRATEGY

3.1. Introduction: data collection and analysis tools.

As a research strategy, I have chosen semi-structured interviews informed by experimental visual methods such as pictures and partial videorecording of those interviews as tools of data collection, characterised by a diffractive and performative sensibility, for the reasons I exposed previously. I took inspiration for this stage of the research by the works of Gherardi (Gherardi et al.; 2016), Mazzei (2014) and Taguchi (2012), which describe how interviews and other methods of data collection can be used to go "beyond" their literal meaning, by considering their performativity in reproducing new affective

assemblages, thus being productive, and not descriptive, of the very affects they are enquiring. Consequently, I considered interviews as "affective exchanges (and) are sites of intra-actional becoming (Barad; 2007), generative and emergent, processual and perpetually in motion (Manning; 2009)". For the same performative capacities, for the data analysis stage of this research project I decided to opt for a Reflexive Thematic analysis of those interviews based on the work of Trainor & Bundon (2021) and Braun & Clarke (2022). This branch of thematic analysis in fact includes the researcher in its framework, and it is apt for the study of the transmission and production of affects as "reflexivity is about more than just one's positionality – it is about the role of the researcher as an active agent in the production of knowledge" (Trainor & Bundon; 2021). In this analysis I therefore mixed RTA with affective attunement, and it consisted in a form of retrospective sense-making of how affects moved the interviews, characterised as a flexible, reflexive, interpretive practice rather than an exercise of "coding reliability", operated through an affective attunement executed with non-representational writing methodologies described previously in this chapter, which allowed me, in the next chapter, to re-present how various affects are emerging as they are co-constituting posthuman practices, thus making those practices, and value, change.

3.2. Data collection

3.2.1. Introduction: Settings and Tools of the Trade

As part of my research strategy, I used 44 semi-structured, in-depth interviews, as main method of data collection for my research project. The interviewees came from both Industry and Academia and in deciding who to interview in these settings, I did not choose to interview only members of specific environments within those settings (ie. Only professors for Academia or only R&D practitioners for Industry), because the process of sociomaterial change I enquired is present in all working practices. In any case, to give more detail to this aspect of the research, for the industrial settings I interviewed workers coming mainly from the R&D and Marketing departments of their respective companies, from different levels of the organizations, thus from Managers to Team Leaders and scientists-researchers. In the Academic settings, I interviewed professors and students alike; the students were all student-researchers at PhD level. I executed the online interviews from my home and from the conference rooms at my University (I also conducted the majority of the in-person interviews to the student-researchers there), while the interviewees answered from different places: the majority of them held the calls from their

workplaces, yet some of them answered to the calls from home or from different places, unrelated to their work or private lives (for example, from the car or trains they were travelling in).

I held 12 of these interviews in person, and 32 of them online. I used both software tools of video-communication internal to the companies that formed my research field; and private ones, such as Teams and phone calls. To support these interviews, I video-recorded 32 of them; moreover, I took pictures and videos of the working settings of the interviewees, by asking them to take them for me after I explained them what I was interested in. I chose interviews as methods of data collection after following the advice of Gherardi, who identified interviews as proficient tools for eliciting affects in different recording platforms (Gherardi et al.; 2016). In fact, as it is possible to become angry, or happy, by having an online conversation in form of written messages – and these feelings, in return, shape how we will write the next message -, I assume in this work that interviews as part of a sociomaterial, intra/active agential cut in the context of a post-epistemology of practices, are capable of tracking how affective configurations such as rhythms and intensities, related to specific occasions, circulate around digital working practices, because of the capacity of the interviews to be performative – in other words, because of their capacity to diffractively re-produce affects as they are co-constituted in the sociomaterial assemblage. With interviews it is, therefore, possible to study how affects act in terms of movements, activities and social processes, which gives a specific mood to a situated practice (Gherardi et al.; 2016, Gherardi; 2019).

The operation of affectively attuning myself to the mood of the conversation had an important role in my interview strategy. As stated in the previous paragraphs, affects in working practices create an affective atmosphere which envelops that practice and participates in its co-constitution (Gherardi; 2017b) and to affectively attune oneself to an atmosphere in an interview means to pay attention at how the embodied rhythms and intensities coming from the research assemblage animate the interview through an operation of non-representational noting and writing (Gherardi et al.; 2016, Stewart; 2007, 2011). To execute this task, I had to train my body to be receptive of such affects, and I had to gear the interviews to allow in them the bodily dimension required to diffract the affective atmosphere. Therefore, I used the interviews as tools for affective attunement, "to devote an analytic attention to how affect in working practices creates an atmosphere in a workplace or create 'worlding' (Gherardi; 2017b).

By attuning to the affective mood of the working practices investigated in the interviews, I considered how the performativity of the interviews as embodied, epistemic practices diffractively re-produces the affects in the intra/action of the elements of the research assemblage. This intra/activity involves, among the others, elements such as discourses, institutions, structures, technologies and indeed, affects; as it also

includes the researcher, the research methods, the interviewees and the topic of the research, as all these elements become involved in a digital working practice. By bearing in mind this ontological and epistemological position, the data collection strategy consisted in using these interviews to make enquiries about the daily working practices of the interviewees, to attune and resonate with the affectivity embedded in practices that involved the use of digital technologies, as this affectivity as ordinary affects were present in that sociomaterial practice and were contributing to form the affective atmospheres. In this post-epistemological context, this means using interviews (but also pictures, videos and audio files attached to those interviews) as tools capable to re-produce knowledge as embodied, situated in practices and affective, to make sure that the affective resonance on my body was as strong as possible.

The interviews thus had to follow daily working practices to understand how affects embedded in this becoming, and to understand how these practices are changing because of the sociomateriality of such affects.

3.2.2. *Interviews: overview of the empirical application.*

Following Gherardi (Gherardi et al.; 2016, Gherardi; 2019), I used a set of 44 loosely semi-structured interviews, each long between 24 to 75 minutes, to elicit affectivity in my body, as the interviewees were talking about their working practices. I kept the questions semi-structured because an affective assemblage (in this case, the interview assemblage that sees interviewer, interview and interviewee as intra/acting) can always open new "lines of flight" (Deleuze; 2007), thus opening the chance to the realisation of new assemblages, which bear the foundation of a new sociomaterial environment. This semi-structure eventually allowed me to follow the flow of affects in the interview, by keeping at the centre of attention the main theme of my research – how are digital technologies changing established working practices and creating affective value.

In the interviews, both online (which I realised with the help of an internal company video communication software, then Teams and Zoom calls) and in person, I tried to attune to the flow of affects with my body, to investigate the embodied sociomaterial assemblages of the posthuman working practices. I paid attention at how the presence of affects was influencing the direction of the interview, and my questions were aimed at discovering which relations in the sociomaterial working practices were expressing the highest levels of affectivity. By following the rhizomatic mood of the interview, I tried to discover how the affects as intra/active elements of the posthuman working practices were driving the assemblage of that practice at that moment and in that material context. This means that, while interviewing, I paid attention to the temporality of affects as they were performatively produced in the research assemblage.

Throughout the interviews, I maintained a personal attitude that was as informal as the principles of professionalism allowed me to be. I behaved in that way to allow the interviewees to be as friendly to me as possible, so that they would express their affectivity more openly, and allow me to gather more data. This attitude allowed me, therefore, to take more advantage of the performative nature of my interviews, as affects had a "better" field to be diffracted in an interview conducted in that style. Eventually, keeping an informal attitude helped me to attune my body to the affects of that sociomaterial assemblage. For the same reason, I also did not retain myself from making considerations on the nature and the potential consequences of my work with the interviewees. In any case, I did this by keeping in mind that an excessive personal exposure might have constituted an affect that could have been too strong and influence the affects under study; therefore, I have been careful in this sense.

3.2.3. Practical interview strategy. 1- Zooming In/Out working practices.

On a methodological-empirical level, after a long introduction, unrecorded, in which I introduced the participants to myself and the details of my research (and in which some interesting material reported in the reflexive diary was collected), I achieved my research objectives by following the strategy of asking to my participants, in the first place, introductory questions about what their work is and how they execute it, on the level of a general description. This allowed me to get a first impression of the sociomaterial assemblage they were placed in. From these introductory questions, I moved on to ask different kind of questions, depending on the nature of the answers the participants gave. I did this to follow the transmission of their affects. For example, if by describing their jobs the participants deliberately choose to highlight a particular aspect of it, as they deemed it particularly important, then I followed down that path and I asked questions about the working practices related to that aspect, and to how digital technologies were influencing them. Otherwise, if I noted that the tone of the answer was rather neutral – at least initially -, I decided to elicit affects myself in a more direct way. I did so by asking the participants to tell me which aspects of their jobs deemed to be the most important and to tell me why. Then I asked them to describe how these aspects happened in practice, and from here on I tracked the flow of affects, by noting how affective rhythms and intensities in the description of the practices were shaping those same practices, as I did in the case of more active participants.

In doing this, I followed the strategy of zooming in/out invented by Nicolini (2009, 2009b). This approach suggests that the study of sociomaterial practices consists in two parts:

- *The first part*, named "zooming in", consists in focusing on the local accomplishment situated sociomaterial practices, by understanding the saying, doings and tools involved in that practice,

and by emphasizing their material/discursive and practical nature (Nicolini; 2009). This operation of "zooming in" can be realised accordingly to a series of methodological and theoretical methods "to re-present" these elements (Nicolini; 2009), which, in the case of this research, consisted in focusing on the role of digital technologies as active materials in the context of a posthuman practice.

- *The second part*, named "zooming out" consists in putting in relation that situated practice with the texture of larger practices that forms the network in which those practices are included, so that it is possible to re-present "the connection between the here-and-now of the situated practising and the elsewhere-and-then of other practices" (Nicolini; 2009). This operation is complementary to "zooming in". A practice should not, in fact, be considered as a material/discursive accomplishment isolated from larger practices; to understand how this accomplishment takes place, it is also necessary to consider how the assemblage of larger practices affects such action in a relation of non-linear causality (Nicolini; 2009).

Instead of drawing boundaries between the micro/macro dimensions of those practices, I theorize the intra/connection between these two plans, and this allowed me to follow the emergence of affects at multiple levels during the interviews. To make an example, as the sustainability practices in a local grocery store are also contained in the larger assemblage of the sustainability policies implemented in the UK and the discipline of sustainability from any academic perspective - and the other way around - I considered these dimensions as intra/connected in my research field. Consequently, I built the interview with a narrative sensibility that allowed me to follow the flow of affects as it was circulating around these two dimensions. This allowed me to follow, for instance, how the sociomaterial affects in the situated practice of Zoom calls were affecting the accomplishment of that practice and how that affectivity in that accomplishment was also contained in a larger texture of practices which involved a higher number of intra/active elements– i.e., the practices related to customer care – service.

3.2.4. Practical Interview Strategy. 2- Interview with the Double.
While I was "zooming in" with my body into the assemblage of specific digital practices with my material/ discursive research tools, I used a specific interview methodology that helped me to attune to the affects in that practice. The "Interview with the double" (Gherardi; 2019, Nicolini; 2009b) is a tool that foregrounds the importance of the description of the working practices made by the same worker. Originated in France and Italy in the field of social psychology (Gherardi; 2019), this projective method consists in asking the interviewee to tell the interviewer what they should have to do if they were to take

their place at work for one day. The description should include as many details as possible of the daily working practice, including aspects that may seem irrelevant such as the act of getting a coffee before starting the computer, and it does not have to address any point in particular, but just follow the thoughts of the interviewee, and continue according to their discretion. By using this technique, it is possible to obtain fine-grained descriptions of the working practices that address feelings and relationships in the workplace, rather than formal aspects of the job. Theoretically, this technique rests on three main assumptions:

- *There must be a trust relationship between interviewer and interviewee.* In this sense, the long introductory part that preceded the actual interview has been essential.
- *The interview is a social interaction and not an objective collection of data.* This aspect reflects the performative sensibility that informs my idea of interview as a research-assemblage.
- *The interviewee must commit him/herself to participate to this style of participatory research.*

(Gherardi; 2019)

The main advantage point of this research technique is that it "overcomes the barriers of self-consciousness and rationality, of social influences, and of unconscious repression.. it yields interpretations that reflect the respondent's interests and preoccupations.. gives the researcher access to the interviewee's mode of imposing order on reality" (Gherardi; 2019). Moreover, this technique is helpful because it allows space for what Gherardi (2019) and Nicolini (2009b) call the "re-presentation" of practices, which is that moment in the interview when the interviewer reflects the practice back on the researcher, thus making it change. Therefore, the interview to the double allows space for performativity of the situated practices that are "re"-presented. Thus, this technique can show how ambiguities and non-rational elements are incorporated in a daily working practice. In any case, the use of this technique can be risky because in the interview the researcher is informed mainly about what the interviewer assumes to be its daily routine, and elements such as situated knowledges and the collective dimensions of a practice can be left out from the description of the working practice (Gherardi; 2019).

Therefore, this interview method has both the advantages of being highly performative of affects in the research assemblage, and to be capable of enticing the interviewer to provide highly detailed descriptions of his/her working practices, which go beyond the formal characterization of their technical aspects which are already known. Simultaneously, this method – and interviews more in general – has the drawback of not being always compatible with the perception of the situatedness of that practice, namely, how material and discursive elements of the larger working setting contribute to elicit affectivity

accordingly to that specific spatiality and temporality; furthermore, it is fundamentally a method of verbal analysis, that is uncapable of detecting non-verbal forms of affective expression (Gherardi; 2019). To help me overcome this issue, the use of video-recordings and pictures before, during, and after the interviews has been paramount, while the audio tracks of the interviews recorded as well smaller forms of non-verbal, but still audio, communication, such as laughs, clicks and puffs.

By executing this task, I have been able to feel the embodied affectivity of the work settings, and to elucidate how these are intra/acting in the affective sociomaterial assemblage of the posthuman practices resonating both in the interviews and in their video-recordings. Now I will describe the tools of data analysis that I used.

3.3. Data analysis

3.3.1. Reflexive Thematic Analysis: the researcher as producer of knowledge.

A Reflexive Thematic Analysis is a strand of Thematic Analysis, an analytical approach which can be both qualitative and quantitative, that allows the researcher to study the data collected by identifying patterns of meaning or themes, and to analyse them (Braun & Clarke; 2022, Trainor & Bundon; 2021). Differently than the other approaches to Thematic Analysis (TA), a Reflexive Thematic Analysis (RTA) has the peculiarity of considering the researcher as producer of knowledge coming from the data (Braun & Clarke; 2022, Trainor & Bundon; 2021), thus giving to it an active role due to both their reflexivity and positionality (Trainor & Bundon; 2021). For this reason, a RTA has a strong interpretive connotation, as the code production (which is the preparatory stage to the theme production stages, which is the main stage of this analytical method, as it will be seen) heavily relies on the capability of the researcher to interpret meanings across the dataset, so that these will be then regrouped in themes in the final stage of the research (Trainor & Bundon; 2021). The adoption of RTA as analytical tool requires the researcher to pay attention to its epistemological stance (Braun & Clarke; 2022). As a matter of fact, RTA is not a procedure composed of different analytical stages that must be carried out, but instead to use Braun & Clarke words, it is about the researcher's "reflective and thoughtful engagement with the data.. and the analytical process" (Braun and Clarke; 2022).

There are various types of reflexivity in TA. Trainor & Bundon (2021), cite introspection reflexivity (a process of self-interpretation), intersubjective reflection (reflexing on the researcher in relation to the participant), and mutual collaboration (which entails considering the participants as co-researchers). Given the affective nature of this work, the nature of reflexivity changed accordingly to the situatedness

of the affects, thus I did not decide in advance which kind of reflexive approach to take in a methodological framework.

In a reflexive approach to TA, themes are produced by organising codes around a relative core commonality, or 'central organising concept', that the researcher interprets from the data (Braun & Clarke; 2022), which usually is – or are- directly related to the research questions. As RTA focuses on the capacity of the researcher to produce knowledge, codes are understood to represent the researcher's production through their interpretation of meaning in the data (Braun & Clarke; 2022). Codes are thus understood to represent the researcher's interpretations of patterns of meaning across the dataset and a reflexive thematic analysis is, ultimately, composed by interpretations of patterns of meaning across the dataset and it is considered as coming from the researcher's interpretive analysis of the data conducted at the intersection of:

- the dataset;
- the theoretical assumptions of the analysis;
- the analytical skills/resources of the researcher.

(Braun & Clarke; 2022).

Considering the performative nature of this research project, I deem a reflexive thematic analysis characterised by high levels of analytical flexibility and the capacity to provide nuanced re-productions of data, to be a suitable analytical tool to re-produce affective vitality in forms of codes, based on rhythms and intensities appearing in determinate situations. In fact, by combining this reflexive and performative methodology with the latest methodological assumptions emerged in Affect Theory, as a reflexive thematic analysis focuses on patterns of meaning in the data by taking into account the role of the researcher in the production of such patterns, it has the capability to re-produce the affectivity of situated practices as sociomaterial patterns of becoming in the context of a working practice that from human, becomes posthuman.

3.3.2. Reflexive Thematic Analysis for affects: re-producing affects in codes/ themes

RTA has thus a predisposition for affective analysis, as this analysis is also reflexive and performative. To give more detail about how I conducted it, there is a methodology mixed with affect theory that Willink & Shukri (2018) call Reflective Affective Analysis (RAA). This constitutes a Data Analysis strategy involving the capability of the researcher to make sense of how they have been "affected" and "affects" the interview at a bodily level, thus making possible to understand how affects made the various realities present in the interview "matter", in an embodied sense. By emphasizing the performative characteristics

of this approach, Willink & Shukri points at how using RAA entails rethinking the role of the researcher, the interviewee and the interview as tool of data collection, to think instead about how these elements affects one another in the interview, thus enfold together relationally in it (2018). I thus executed RTA in accordance with these principles, because of its performativity, openness to post-epistemologies, and focus on the role of the researcher as productive of knowledge and, in this case, affects.

RAA is a style of affective analysis that requires the researcher to pay attention after the interview to the ways in which corporeal or discursive expressions such as a look, a feeling, a joke or a particular choice of words make the direction of an interview steer in a determinate direction, by starting a digression on the main topic of the interview, for example, or to change topic of discussion at that determined point of the interview (Willink & Shukri; 2018). RAA is "a way of registering, sensing, and making sense of the affective movements in interviews to highlight what Stewart describes as "the quality of a continual motion of relations, scenes, contingencies, and emergences" (Stewart; 2007). A RAA is therefore an analytical method that can map the emergence of affects in its lively forms, as it considers how the elements of the interview such as bodies and language come together in the interview, including the researcher and the interview itself, as these relentlessly affect and are affected by one another during the interview (Willink & Shukri; 2018).

RAA is based on two concepts that, taken simultaneously, are complementary to one another for its accomplishment (Willink & Shukri; 2018):

- *Aesthesics* points at the ability to perceive and register the non-representational, which involves an ability to attune the senses to the world as it develops.
- *Aesthetics* in interviewing means exploring the "social work of aesthetics in communicative experience, "the inter-relational practice of performance" (Jackson, "Relational") in the field, on the stage, and on the page".

In RAA, these two elements are thought to be complementary and that they should be considered synergistically. In fact, a RAA considers Munster's notion of "aesthetics as aesthesia" (Munster; 2001). According to her, the nature of aesthetics as rough contemplation of beauty and its effects should change to accommodate the more bodily operation of attunement that aesthesia entails. Aesthetics thus should change and be considered the "arena of sensation itself… concerned with a range of corporeal processes" (Munster; 2001), thus eschewing the cognitivist aspect of an aesthetic experience based on the separation between mind and body.

In a framework of Aesthesics as Aesthesia then, the corporeal activity of sensing blurs the boundaries existing between the cognitivist activity of contemplating something and the experiential situatedness of being attuned to it sensorially, as it focuses instead on how these elements can affect each other producing themselves on multiple planes, both discursive and material (Munster, in Willink & Shukri; 2018). For this reason, this analytical tendency is open to a relational post-epistemology, and a thematic analysis that equally foregrounds the role of the researcher as producer of knowledge in a diffractive, reflexive and performative sense can benefit from it. To use the word of Willink & Shukri:

"Aesthetics as aesthesia is a non-representational attempt to approximate, not to simply capture or conceptualize, but to come closer towards the "becoming of sensation" and "corporeal becoming" as relational endeavors within an interview. In other words, taken synergistically aesthetics as aesthesia illuminate the constitutive logic of the in-between, the relational interplay of the interview dance." (2018)

I took advantage of this analytical framework in the context of a Reflexive Thematic Analysis, to make sense in the interviews of how the sociomateriality of affects in digital working practices have animated the interviews of my data collection stage. The "Aesthetics as Aesthesia" of the interviews can thus be made meaningful in the light of the practice of affective attunement (which is the methodological tool that, now it should be clear, provides the methodological and theoretical basis to RAA together with "Aesthetic as Aesthesia") to the vitality forms of affects, such as rhythm and intensities, that give rise to determined affective atmospheres.

In the next paragraph, I will discuss how I re-produced affects in their lively forms into codes, and then how I will use these codes to form themes that will exemplify how this sociomateriality is making the nature of working practices change.

3.3.3. *Reflexive Thematic Analysis: empirical application.*

To put this analytical tool in practice, I created codes by considering how the lively forms of the affects in practices resonated on my body. Throughout the analytical process, I adopted an abductive sensibility that allowed me to maintain reflexivity, as I iteratively considered the data and the theories I was using for my analysis, and this iteration allowed me to create – according to my adopted epistemology, focused on social production - a more accurate knowledge through a more specific appreciation of the elements, discursive and non, that were creating affects in the interviews.

For this process, I applied the framework used by Braun & Clarke (2022), who support the idea that a Reflexive Thematic Analysis consists of six stages, that I will now present, together with a description of what I did in each stage.

1   Familiarisation with data.

In this stage, the researcher engages with the dataset to get an overall sense of the context (Braun & Clarke; 2022). I already started this stage of the analysis during the data collection stage, as I was attuning myself to the atmospheres in my intra-activity within the interviews. I did so as I used the transcription stage of my interviews into NVivo 14 as a preliminary analysis to start familiarising with the data. I did this by compiling on NVivo, a list of elements of any nature, such as activities, objects and situations around which affects have emerged in the interviews. This helped me to orient myself better in the subsequent open coding stage of the research, as it allowed me to be mindful of how I was attuning myself to the transcripts and the other data sources. In this stage, I thus checked the interview transcripts as I was compiling them, by using also the audio/video records (or just audio, when this was the only source available) looking for any aspect that interview as part of their working practices, by paying attention at the affective resonances, rhythms and intensities that were emanating from the interviews as these expressions of affects were emerging from those aspects. To do so, I used the video-recordings of the interviews while I was reading the excerpts to note changes in the facial expressions and in the tone of voices. During this stage, I maintained reflexivity also by checking the journal of field notes that I held during the interviews stage, in which I reported a record of my reasoning, judgement, and emotional reaction to the most affectively laden interviews. Moreover, as the video tracks of the interviews included a section of the screen in which I could see myself during the interviews, that added another important element of reflexivity.

 Ultimately, this stage did not stop once I started the first round of coding: as I collected data in two different periods of time (the first going from October 2022 to January 2023, and the second during November 2023), I had the chance to go back to the interviews I already coded, and familiarise again with their content at the light of the new transcripts I obtained in the second batch of data collected.

2   Generating initial codes.

In this stage, the researcher identifies and labels meaningful data features by looking at commonalities in the dataset: this operation is named coding (Braun & Clarke; 2022). I did this in two different rounds of coding, one of open, and the other of axial coding (Braun & Clarke; 2019), between starting to work on the themes. The stage of open coding happened twice, as I collected data in two separate times; while I executed the axial coding stage only once, even though in both stages I maintained a recursive approach, as I changed the content of the codes while I was obtaining new inputs from the dataset.

After I already attuned with the affectivity of the interviews in the familiarization stage, I obtained the first codes by focusing on the semantics of the transcripts, but also on the latent meaning that was contained in elements such as specific sentence formations or breaks in the interviews that indicated silences; when I deemed necessary to go back to the videos/audio records of the interview to have a clearer understanding of the code, I did so. As I was obtaining the codes in my NVivo 14 file, I added to each one a short description of the content, which I changed iteratively as new nodes were added to that code as I was proceeding in analysing the interviews. I also reported codes that were present in more than one interview, to help me orient in the interpretation for the second stage of coding. To produce these open codes, I again considered the elements as relational processes, in the description of the working practices, by attuning myself to the affects circulating around such processes, as these emerged from the interviews transcripts, which I used with the reflexive diary, the pictures and the videos I have taken of the interviews when needed. At this stage, I obtained 107 codes, with an average between 20 to 25 codes for each of the 44 interviews.

For the second round of axial coding, I relied mainly on the semantics of the codes I already collected, as I already conveyed the affectivity in the formulation and description of the open codes. I did this by reporting all the codes on a PowerPoint sheet, then I regrouped them based on their content. Ultimately, I obtained 17 axial codes.

3 Generating themes/Reviewing potential themes

In these stages, the researcher creates clusters of codes, by looking for patterns of meaning within the data (the themes), and then I refined them (Braun & Clarke; 2022). I executed these stages iteratively on PowerPoint, as I reconsidered the themes and their meaning also during the iterations I produced to devise the final model, which guaranteed me another degree of reflexivity, as these iterations were influenced by the new ideas I was developing around the data.

Before obtaining the themes, I obtained the subthemes in form of stories. To form these stories, I further grouped the axial codes by trying to evoke the affects that the elements included in them created, so that I could create stories capable to evoke the affectivity circulating around specific aspects of the working practices. To help me in this operation, for each subtheme/story I wrote a short description, accompanied by a list of the axial codes I chose which formed the structure of the story. For instance, for the subtheme "Building Trust and Convincing External Stakeholders" in the theme "Working as a Collective, Embodied Activity" I wrote a short description which says "describing how working with external stakeholders and customers becomes an essential part of working practices. To do this, trust

building becomes essential (personal affective elements emerge also here). At this point of the analysis, I was allowing the research questions to let me guide more deeply, as I was concluding my work.

4 Defining and naming themes.

In this stage, the researcher articulates the meaning of each theme and what it explains about the data (Braun & Clarke; 2022). After obtaining these stories/subthemes, I applied the same regrouping process to obtain the four themes, so I kept in mind the research questions while I was formulating them, and the semantics of the subthemes, as I tried to formulate four themes that could most effectively indicate the social process around which affects were emerging. I never actually completed this stage either. In fact, I have renamed the themes as I developed the sections of the process model I included in my discussion chapter; thus, as I was further interpreting my data. As I developed the model then, which I deemed to be completed in March 2025, I had the chance to think about how I was influencing the themes, through my understanding of the theoretical framework of the research and the research questions, and this allowed me to include another layer of reflexivity in this final stage of the data analysis. Thus, I obtained four themes: "Working as a collective, embodied activity"; "Working as a personal accomplishment"; "Working as Activity of Knowledge Creation"; "Working as a Situated Practice"; within these themes, I individuated four working practices around which the affects were circulating, by semantically and latently re-interpreting all the analytical steps. For each theme, these are respectively: "Persuading", "Controlling", "Searching", "Choosing Space/Times". Eventually, I produced the report, which I present in the next chapter as my research findings.

Chapter 3. Results

1. INTRODUCTION

1.1. Evoking Affects.

In the previous chapters, I highlighted the theory of value as affect, and how it is possible to track the emergence of this value by considering it in the context of the posthuman theory of practice invented by Silvia Gherardi (2019).

After completing a Reflexive Thematic Analysis as described in the previous chapter of this Thesis, from the data collected I obtained four themes. These themes highlight how digital technologies are letting affective value emerge as they contribute to create four different existential characteristics of working, which I name "posthuman conditions of working", because of their sociomaterial determination. By following the content of the chapter, I will now re-produce the affects in value creation practices according to their resonance, intensity, and rhythms, as these resonated on my body in the four sources of the interviews that I identified:

- **The video/ audio recordings**, which made me able to re-present both the affectivity coming from bodily elements such as facial expressions, gestures, specific movements, and the affectivity coming from the audio characteristics of an interview, such as the tone of voice, specific pauses in the conversations, etc.
- **The written transcripts**, which made me able to re-present affectivity coming from the characteristics of the writing, such as specific rhythms, long pauses, specific sentence formations, etc.
- **My own memory**, as I held a research diary, this made me able to re-present affectivity as it impacted me at a determined moment and a determined time, by remembering my own reactions to certain settings - assemblages.
- **The pictures of the working stations**, traces of affects can be left in the working stations, as particular ways to organize a desk, or because of the presence of determined items, such as family pictures.

To execute this task, after I affectively attuned my body to those affects in the non-representational writing I performed to obtain the codes and then the themes that constitute the results contained in this chapter, I attuned myself again to the ordinary affects of the RTA in the subsequent text, to show how the sociomaterial affectivity of digital technologies is participating in the co-creation of the four

posthuman conditions. By doing so, the reader will be capable to affectively attune their body to those affects, in the most effective way possible. To produce this text, it has been difficult because affects as intensities cannot be represented because of their relationality but only made "present" through an operation of "worlding" realised in the attunement of the body of the researcher to the affective atmosphere of a working practice, which coincides with the operation of non-representational writing (Gherardi; 2017b). To produce this text, thus, I had to look for what MacLure refers to "data that glows" (2013), which is data carried with affective intensities, capable to leave a bodily impression on my body, charged with non-representational significance.

Following Gherardi, (2016) and Stewart, (2007), I therefore do not "propose an analytic text to show "where affect is" and "what it does"; rather, to produce this non-representational text, first I tracked the sociomaterial traces of affect in the sources I used to complete the RTA. According to what I mentioned in the previous chapter, where I described how ordinary affects can be found as affective atmospheres through "worlding", and that these affects have specific shapes through their "forms of vitality", this means that to build this text I looked for the affective resonances, rhythms and intensities, expressed within the "bare bone" occasions that formed an affective atmospheres, situated "in the choice of words, the pitch of the voices, the crescendo in the verbal interactions, the mimicking of other (absent) voices, the broken language and the rhetorical figures of speech" (Gherardi et al.; 2016); then I tracked these traces again in the RTA once this was completed, to obtain the results wrote in non-representational form as they are presented in this chapter. To quickly mention again what is the focus of a non-representational text (that re-creates the ordinary affects through "worlding" as affective atmospheres according to my methodology), this is a text "on how life takes shape and gains expression in shared experiences, everyday routines, fleeting encounters, embodied movements, precognitive triggers, practical skills, affective intensities, enduring urges, unexceptional interactions and sensuous dispositions" (Lorimer, 2005), thus to produce this text, I let the data that "glows" affect my body in the aforementioned occasions, first during the RTA, then from the results of the RTA itself.

This chapter can be intended as a non-representational text in the form of a "guide" that will allow the reader to better resonate with the affects. In the next chapter I will explain how affective value as intangibles is emerging in digital working practices as I will describe the parts of the process model I constructed from the results here reported.

To give more context to the content of this chapter, affects are emerging in practices in relation to two structural characteristics of the practices, the motivations for the practices and the directedness of attention of the practitioners while practicing their practices, but to discuss these characteristics now

eschews the ends of this chapter. For now, I only want to present the results of the RTA. Thus, the themes that I have created from the data are four:

- *Working as Working Together*, explains how digital technologies are changing how collaboration is enacted, as these technologies participate in the practice of **persuading/convincing** that is becoming fundamental in the context of collaborative working, and it shows how affects emerge in this practice in relation to motivations such as ideas promotion, and how these affects are directed towards activities like trust building and considering aspects of the working life situated beyond the professional sphere;

- *Working as an Individual Activity*, explores how digital technologies are shifting the sphere of individual autonomy, as they participate to co-create the practice of **checking/controlling** that is becoming of the utmost importance in this context. In fact, the results shows how affects in this practice are emerging from motivations related to topics such as the uncertainty of the working environment and the need to achieve efficiency, while the attention of the practitioners is directed at activities such as arranging different working settings;

- *Working as Activity of Knowledge Creation*, shows how technology is mediating knowledge production: in this context the practice of **searching** is gaining importance**,** as the results show affects are present around it. Some of the motivations for affect emergence in this context are given by the need to create knowledge and co-create value, while the attention is directed, for the realisation of this practice, on activities such as the creation of "good quality" knowledge and the management of meetings from which new knowledge can potentially emerge;

- *Working as a Situated Activity*, as a final theme, shows how technologies are influencing the experience of space and times at work, as this theme is centred around affect emergence in the digital sociomaterial practice of **choosing working space/times,** which the activity of digital technologies in the agencement of that practice is making increasingly important for value creation**.** Motivations that guide this practice can be found in regard of efficiency (shared with theme 2), and the directedness of the attention in this working practice is aimed at considering elements such as time rhythms, working atmospheres and organization of meetings.

2. FINDINGS

2.1. *Note for the Reader*

I have identified the participants by using an alphanumerical code, which includes:

- For the letter A, B, C; participants coming from three different companies that have participated to this project,

- For the letter D; participants coming from academic settings.

2.2. *THEME 1: WORKING AS WORKING TOGETHER. practice: persuading.*

Picture: Technology participates to create the atmosphere with collaborative environments and shapes collaboration.

I have created three subthemes for this theme. For each subtheme, I will highlight how affects circulate around motivations and directedness of attention in the context of the practice related to each theme.

- *Building Affective Relationships with Colleagues to establish Efficiency through Persuasion.*
- *Building Trust and Convincing External Stakeholders.*
- *Collaborating with the Non-Human: Persuading in Uncertain Contexts.*

2.2.1. Building Affective Relationships with Colleagues to establish Efficiency through Persuasion.

The effects of technologies on collaboration through the practice of persuasion can be evoked from how the capacity of building affective relationship between colleagues is becoming paramount, because it is fundamental for that practice. In the analysis, there are many examples of how this capacity is put at work.

For instance, this is an achievement that can be reached as a negative or positive consequence of the technical capabilities of digital technologies. To mention a case in which an interviewee referred to the fact that deeper forms of collaborations could be established outside of the use of technology, D10, unequivocally states that:

"I would rather go for in-person meetings because this is better for me to present myself, and to talk about my research idea. Sometimes when it comes to writing email is maybe difficult for you to write up all of what you've been thinking in the email, or sometimes is not really deep enough for them to get to understand what you really mean." (D10)

To mention another example, speaking in person rather than online gives the chance to answer to questions quickly, with positive effects for training sessions. At the same time, this way of collaborating helps participants to establish a deeper emotional connection. When I asked B9 what she felt about teaching her colleagues in real life meetings, she answered:

"That is something I'm working on and asking for, for feedback on from people. So, one of the things I've heard is that people want in-person training, so they want somebody in a meeting room doing live demonstrations. You can ask questions. And so that's something we're going to set up on a quarterly basis every three months. I'm planning on having kind of a tool expert available in our meeting rooms.

Running a training in person will show how to use the tool, which parts you need to click on to use it. So, I think people find that useful as well, being able to be there and ask questions live rather than say just like a prerecorded training video. But you just go through all like a written list of instructions. So, and that is something I'm working on to make sure it's accessible and it's what people want and a format that they want." (B9)

To mention another example that explains the importance of meeting using technology rather than in person, in the context of persuasion, when I asked A10 about how her colleagues came to work together to work on a specific project, she told me that:

"Yeah. Yeah. So, and I think I already mentioned that because for me, the exchange with the team members is the most important and I guess that applies to every team. At least it should because our teams are built with different backgrounds.

…

And if you are sitting together in a room virtually on us, doesn't matter and discuss just a specific topic. It's so valuable on one hand. So, of course, it brings you or gives you more insights into the status quo, it gives you a better perspective and vision for how we should the project go. But on the other hand, you're learning so much." (A10)

In this case, technology helps bridging colleagues with different specialization areas and departments, that find themselves working together on the same project.

A reason behind the establishment of these forms of collaboration is the importance to know what colleagues may or may not do in a certain situation, so that it will be possible to better orient the working practice of the single worker – forecasting then becomes another focus of attention in the practice of persuasion. To do this, it is necessary to know them also on a more affective dimension of working together, according to the results of this research project. This need to establish a more personal connection to know what they might or might not do is related to the uncertain contexts in which digital working practices take place (which will be analysed more thoroughly in the next paragraphs of this section), which then becomes a motivation for affects emergence in persuasion practices, and this becomes necessary to establish effective collaborations. To reference A1, when I asked him to describe me a usual daily working practice of him, he replied:

"As I said, you would as a first step go there. Um, get a feeling, um, what the, what the others found or the feeling, but get an idea of what the others found out. And with that knowledge, um, you would challenge your own plan for tomorrow. And that plan for tomorrow would be something that I, you know, hand over to you or tell you, um, because, I mean, I have, I have a, have a, you know, this or plan what I want to do." (A1)

From this activity related to establishing affective collaborations, is directly related another activity of sensing. In fact, having a feeling of what your colleagues are doing is linked to how you feel about your work topic in general terms, which is a perception that can also influence the development of a research project in a determined digital working practice. This condition will be treated more thoroughly in the next sub-paragraphs.

As mentioned before, there are different ways in which these affective relationships are established. An important code that emerged in the data is the relevance to establish trust relationship between colleagues, which therefore becomes another focus of attention for persuasion practices. Trust is important, in fact,

to understand many unpredictable aspects of collaboration that are a consequence of working in an uncertain environment, which is a motivation that makes persuasion as a practice important. In absence of a fixed working schedule, in fact, persuading becomes an important factor in the establishment of a clear path for future work.

When I asked C6 why she needed to meet her colleagues in person time by time to work, she replied, after explaining me briefly how the COVID-19 global pandemic prevented her from doing so:

"Right. That to me it makes a difference in yeah, in getting a feeling what's what type of looks, what type of person do I work for. And I noticed that you have more trustful collaborations If you had those real life or real person interaction." (C6)

To mention another example of this, while we were talking about how she felt about the supervisory meeting she had online, D4 said:

"I was really glad that they (the meetings) exist because otherwise I wouldn't have access to my second supervisor and that's very important to me. And I appreciate just in general how like the access you suddenly have to the end of the world. So, I do appreciate that. Of course, it's different than being in person. It's a lot more formal maybe, and a bit more like the like we do for personal trust. But then it goes quite like formal more, which probably would be different when we meet in person. But overall, just glad what access it makes available." (D4)

As said, building trust between colleagues and team members is directly related to persuasion activities, according to the answers of the interviewees. One of the motives behind this, is the fact that collaboration between departments involves the ability to adequately promote your idea. A worker therefore needs to be able to convince, by persuading, the leadership of their management team the validity of their idea, which is an activity that also requires to be able to establish an emotional attachment. To make an example, when I asked B6, to describe his daily working practices, amongst the other things he stated that:

"And then I do spend a bit of time as well, probably maximum half an hour a day trying to do my own work, whether it's creating a new strategy, writing a document to implement a strategy for some sort of change, to basically convince others or influence others It's all just to kind of and roll into my sort of idea and drive it forward, whether it's an update that we're giving it to senior management, you know, this year or CEO or whatever, right on something we would be writing about, you know, creating a presentation or something about making a video." (B6)

This operation of persuasion takes place into the same uncertain working context that makes the activity of having a feeling of what the others are doing relevant, therefore it further shows the importance of

establishing forms of affective communication with the same team members for the sake of achieving an effective persuasion. Convincing other team members and leadership about the validity of your work is related to communicating to them understandings about how to create value for the company, which is therefore a motivation that allows affects to emerge in persuasion as a practice. It is important to notice how this motivation is closely intra/relating with creating value for customers, which will be addressed in the next sub-paragraph. An example of this situation can be found in the interview I made with A7. When I asked him to briefly describe me his tasks, he said:

"And I, I, I kind of came out in different research into varying topics, especially in the area of digital aviation and trying to identify the potential and value of the project to the organization, to the customer, and taking a look at them and define them in different from different angles. Some people look at them, the technical aspects, to see if it's feasible with what is currently answerable and the financial requirements, the market value present to the organization and then try to and make an outline of the adequate resources towards achieving this." (A7)

This aspect of value creation is also treated in the next paragraph.

2.2.2. Building Trust and Convincing External Stakeholders.
As technology makes the practices of persuasion important, it also makes working more focused on trust building. To make an example about the importance to establish relations with customers which can involve more personal aspects, and possibly, their identities, I can mention an excerpt from the interview I made with A16. When talking about how technology changed the ways in which him collaborated with external customers for product development, he said:

"I would say on the one hand, um, for very obvious reasons is that you cannot see what I'm doing down here with my hands, and I could be totally distracted. You would see that when we are sitting in the same room. Not that I always do it, but I find myself sometimes doing it. Um, and then. And then when you are together in the room, that's much more than just having a total picture of someone.

It's really being together in a room, working together on a specific topic, and we can see everyone at the same time. And also, let's say you can get more of those personal feelings, vibrations maybe between the person which you normally do not get if you just look at a picture." (A16)

As in the case of collaboration between members of the same company, technology can have both positive and negative implications on the stabilization of these affective collaborations, necessary to achieve persuasion. In the next excerpt, technology use is exposed to have direct negative effects on the

number of participants, because the low number of participants to online meetings can be detrimental for collaboration. To keep referencing A16:

"What is also important, um, the fact that if you do in virtual meeting, um, you know, basically you will not get the full attendance from, from your customer. It depends on the workflow that he already has right over the date." (A16).

The same level of collaboration and attachment can be found also in the relationships the team has with external stakeholders who are not customers, for example, governmental institutions or universities. Also in the relationships with external stakeholders, in fact, affective ways of persuading can eventually sustain, or delete, a project, under many different areas – including the technical and financial one. To reference B2:

"So some of my problems.. the problem is that we don't really know how to back that at the moment, we don't, we don't have sufficiency of technology on how to do it. We don't know how to do it. That's what I'm trying to figure out what I done. What are the immediate steps I can do right now?
Um, whether it's partnering externally with universities and with other indices in order to collaborate to tackle this kind of challenge and develop technologies that would allow us to do so. So, so, day by day, just, you know, small steps toward that formation of learning plans, transformation of, you know, trying to get funds in order to set up a project that would allow me to develop certain technologies." (B2)

Trust building is paramount also in the context of persuasion practices between customers and developers, to make sure that the relationship becomes stable and more productive. In fact, similarly to what happens in the working relations between colleagues, activities of trust building between internal and external partners are inherently embedded and inherent to persuasion, which are fundamental to pitch an idea or a project proposal that could be put into the development stage of the product. The interview with C2 shows how trust building is a resource in the relationships with customers. In describing how the new algorithm used for their app changed their business model, and the ways in which they work, C2 stated that:

"Customers can leave feedbacks on the platform, but now it's more like we focus on yes, like just collecting feedback from like the event manager or whoever. But yeah, yeah. I mean it's still like we still rely on reviews because I think that's really important for our reputation, you know, and I think because we're [...], I, it's good to have like that kind of status behind us because, because yeah, we, I guess we don't quite have the experience. Yeah. So we like, build the trust with them a little bit more." (C2)

To mention another excerpt, where the capacity to build trust is directly related to emotional attachment and bodily feelings, when asked about his daily working routines A4 said:

"It is a novel thing but also reaching out to their customer, or somebody that would be a possible customer for that specific application and looking to get direct feedback from that end customer and really looking at pain points and saying, okay, well, we try not to go directly to conversation and specific questions like, hey, if we solve this problem, is that useful for you? More of how do you go about your day? What does this look like? And we try to, say you know, kind of fuel around to say, is there a problem here is I mean, we think we have an idea where we can solve something for you is, are you giving me input that makes me believe that there is an actual problem?" (A4)

The interview with B5 is an example of how trust building can relate to pitching certain projects to customers or other external stakeholders in the context of persuasion activities, which is, again, a motivation for affects emergence. In this regard, this excerpt is interesting also because it shows the interrelatedness between internal and external collaborations for project development:

"And then kind of advance those projects. A lot of them need you to apply for funding to establish the project. So, whether it's like UK government funding and or Horizon Europe funding through the EU to do that, it's typically there are multiple partners like different companies that are part of those applications. And so, you need to work together effectively to like to establish the team of the different companies who are going to get, you know, trying to out the projects and trying to get the funding for it." (B5)

To convince external stakeholders about the validity of the project idea, it is important to consider what the actual value for the customer is, which, as said, is a motivation for affect emergence in the practice of persuasion. When I asked A14, about how she collaborated with customers for product development, she answered:

"I don't know if you're familiar with concepts like user personal loss I would actually use, and the solution would be the one who's giving the buying approval because you mainly have multiple people with different roles that are involved in the purchasing process of certain product. So, we have to understand one place which we're all basically in this thing, and which arguments do we need them to convince, for example, the buyer to buy this and, what is the actual value for them?" (A14)

The results therefore show how building trust and collaboration with external stakeholders is essential to produce value, because without this capacity it would be impossible to enact effective persuasion. It is important to notice how these relationships are directly related to the relationships of internal collaboration analysed in the previous paragraph, and to the sociomaterial context that also exerts, through its non-human elements, a form of agency in these sociomaterial practices of collaboration –

and persuasion. An analysis of the collaboration with the non-human elements of the working practices will be now offered.

2.2.3. Collaboration and the Non-Human: Technologies, Environments and Persuasion practices.

As technology influence collaboration through persuasion practices, the influence of the non-human elements can have an orientating role in this practice. Consequently, these elements "collaborate" with the human actors, within the sociomaterial assemblage of that practice. Sociomaterial elements and their influence on the practice adds an aspect of uncertainty to the organization of a working practice, which its immanent and ongoing characteristics as a collective posthuman accomplishment. In this context, the abilities to persuade and convince become paramount, because the development of working activities becomes open to multiple options.

The effects of factors such as the Ukrainian or the Israeli-Hamas wars, the CoVid-19 global pandemic, and the global economic recession on the working practices can be mentioned as examples of how non-human elements contribute to define these working practices, and the importance of persuasion. The influence of material factors, in the form of uncertainty, becomes therefore a motivation around which affects emerge in persuasion practices. This motivation is shared with the technological uncertainty that will be treated in Theme 2.

To reference an example from the interviewees employed in Industry, B4 referenced how CoVid-19 made working practices more digital. He told me:

"So, so yeah, I think, I think the digital tools are starting to nibble and I think probably Covid forced us to embrace some of those digital tools even more. Um, you know, to, to keep the business running. Um, so, yeah, I think the software and the tools that we use just do, do help. I, I do think for technical conversations and technical discussions, it's still difficult to do that virtually." (B4)

In this regard, to mention an example that shows why teachers must be "persuasive" to win the attention of their students, D7 said that:

"I would say that initially, by initially I would mean that when I started teaching during the CoVid days. So, it was challenging because I wasn't too familiar with these tools and, perhaps, I missed out on attending certain sessions and trainings for those now that I regularly use them. So, I'm properly comfortable. So initially was a challenge for me to even deliver a class online, because I would notice that it was usually a one-way communication, because I used to be doing all the talking and many of the students would just take to the dead microphones or the cameras off." (D7)

The influence of these external factors on the daily working routines of participants made day planning much harder, as these added an element of randomness to typical working days. Considering the level of unpredictability is important, because it brings into activities of decision making the ability to sense and perceive future potential working contexts, as it is shown by the next excerpt from an interview. Sensing as forecasting becomes therefore connected to persuasion, as a focus of attention in the context of that practice.

When I asked how the laboratory practices and the managerial parts of his world came to be entwined and influence each other in a daily routine, B3 said:

"And I think a lot of that is, uh, unpredictable, right? I mean, the, you know, things like recessions, pandemics and all these things. Yes. Some things with being upcoming and we plan as this, we can at least necessitate, but some things can't speak it out, are very difficult to predict. They all um, and I, again, as part of the source of that information, I need to, I need to be able to smell, you know, that well, what is it?" (B3)

According to the interviewees, technology use itself and the changing conditions of the market, also contributes to create this level of uncertainty in digital working practices – and this is what connects Theme 1 and 2. Therefore, workers must work on unplanned tasks, because of this unpredictability. In the context of the interview with A16, while I was asking the multiple interviewees about how they worked with external customers for project development, one of them reported that:

"The projects I am, we are working on in this context for the externally funded projects go for a much longer period than the internal ones. And that means in three years, for example, the external environment changes a lot. And so, we need to always adapt to the changing environment to also support our short-term goals, goals say so these this is the, the regular exchange that is needed with our internal customers who don't see the expectations of, the expectations of our managers." (A16)

To mention another example, when talking about the necessity to change business model to accommodate a change of needs in the market, C2 stated that:

"I feel really happy about I guess, I guess just the nature of like, yeah, yeah. You always need to like face a lot of change and uncertainty. I think the mindset at the beginning of like you into this whole thing, you should have a clear mindset before then just to, to kind of like understanding. Yeah, things will never go like, yeah, you've got to take risk. I think that's the thing with it." (C2)

From this situation, according to the interviewees, often workers must work on unplanned tasks, which is a situation connected to uncertainty and persuasion, as mentioned before. D2, in regard of his daily working practices stated that:

"I'm still checking what's happening around me and if there's anything I need to respond to. So, of course that's always part of the working day. Thinking about other case student actions, other elements of teaching related aspects that are popping up. Because of course, even if you teach, it's not just teaching, it's preparation. It's other administrative things you need to take care of." (D2)

In this regard, in the industrial context, A14, included this thought when I asked her to describe me one of her daily working practices:

"So you know, what needs to be worked and then, um, I don't know, maybe there's something urgent coming in between as well, which you need to focus to first. Otherwise, we'll start working on one of these tasks. Um, probably understanding on your own first what is actually needed. So, what's the goal of the task? What do I need to do in order to achieve that with maybe help from someone that I would approach this person?" (A14)

This presence of this element of uncertainty thus entails the necessity to be able to orient working routines and schedules. Consequently, it requires workers to allow perception and intuition to drive daily decisions at work, given their uncertain context, which then become important elements in the practice of persuasion. Before telling me that one of the main scopes of her job was to hold "sensing" meetings where she could understand what their colleagues needed (and, therefore, how to orient her own working practices), B9 said about those meetings that:

"So if we can get a feel of that say right where are we? Where the focus points focus on them and then like I say, I hope we see improvement. That's another way that I'm planning on. Haven't implemented it yet, but that's the other thing I've got planted to learn more about what people need." (B9)

In the same fashion, when I asked A9 to describe me how she worked, she told me that her work tasks were mainly about exploring the chances for new products that could be found in a "rapidly changing market environment". When she started explaining me about her most recent project, she told me:

"It's a computer algorithm that's the next best thing. And that is usually how I describe my work. I explore in a lot of different directions, and then I just do whatever looks good and it's not too much effort. And that has to do with my topic because it is so far out in the future. I'll ask you about a you know, what is the best course to take." (A9)

I will now proceed with explaining the second Theme, which intersects with this one in many aspects, as collective and individual working become increasingly intra/active in the context of digital working.

2.3. THEME 2: WORKING AS AN INDIVIDUAL ACTIVITY. *Practice: controlling.*

Picture: Technologies influences self-management at work, thus the practice of controlling, as the atmosphere given by Post-it notes on the desk and wall suggests.

For this theme I have selected three subthemes:

- *Controlling as time/space management.*

- *Technology and Identity. How identities intersect with controlling.*

- *Technology and Culture. How sociocultural assumptions influence controlling as a working practice.*

2.3.1. Controlling as time/space management.

Technologies are blurring the boundaries between private and public life, thus influencing the practice of controlling. In fact, as digital technologies drive working practices into a climate of constant uncertainty, as seen also previously, for workers it becomes difficult to plan a schedule composed by fixed dates, times, and tasks to accomplish before deadlines.

The results supports the idea that workers are continuously re-arranging new working schedules and that many affects emerge in the practice of controlling around this focus of attention. When asked, many interviewees reported that it is their simultaneous involvement in different tasks one of the reasons for this situation; another reason is the fact that, with the high level of flexibility of working places and times brought forward by digital technology, it is now necessary for them to make private and professional time schedules to coincide to effectively organize every single working day: as it will be better seen later, this motivates the emergence of affects in this practice.

To mention the case of A12, when I asked her if she was working part time and only on specific tasks after she had to leave job for a certain period, she answered:

"Oh, no, no, I wouldn't say that. I just do not work on so many science projects anymore, like the student needs to, like I'll just say, like science projects like every project, for example, on, on environmental topics. Then we, we have that or women's community practice which is focusing on diversity and inclusion and those things. I was more like working on those things besides my job as researcher, but now, at the moment, I'm really like 90% of working just on the assigned research project, which is really the job that I'm paying for, let's say." (A12)

It is important to notice how, in these contexts, schedules are built not around the objective of working for a certain number of hours. For instance, the same interviewee, while we were talking about how her working days were structured, told me:

"So, somehow the project and the days are structured. So, we are and I think you already heard that from, from my colleagues, usually quite flexible and how we work and it always depends on the topic and the team and the stakeholders you have for the project. So, yeah." (A12)

To cite another example, when I asked A13, about how he organized his working days, he answered:

"Okay. Yeah. Um, so I think for me that, ahem, I mean, I don't have a specific kind of rou.. routine, as it is, but basically it's mostly my focus on my job is really about problem solving, trying to connect the dots, really.. If I am able to identify a specific technical problem, then I try to connect the dots between that problem and what could be." (A13)

D5 told me, while we were talking about how she met with her supervisor, that their meetings were just loosely planned, and that the meetings occurred just when the circumstances required them to happen:

"Oh, good. It works for me really well, I think. We don't do it weekly. We do when it's needed, which I would say averages bi-weekly. Um, I feel good about it. I think it works for both of us, which is important because I think it depends on both parties. So, what's a good thing to do or what isn't, and I feel like when there's an urgent need for me to meet, there's always the possibility I don't have to, like, wait for seven, eight days. Um, but also sometimes I just need more time to prepare

things. And I know what needs to be done, kind of, but I haven't enough time to do so. So, um, especially in our teaching and stuff, um, it's kind of good to be more flexible on that." (D5)

The level of control that a worker has, or not, on the development of a working practice can thus influence the development of that practice. Technology, in this case, can allow a deeper level of control over working activities, and this makes of technology a focus of attention for the emergence of affects in controlling; yet it also creates the uncertain conditions that are its motivation. As focus of attention, the influence of technology links Theme 1 and 2, even if this link is more centred on the influence of technology in creating uncertainty, which will be seen later. When I asked D11 how technology changed her relationship with the students, she referred to the capacity of technology to detect if the students were engaged enough by the module or not:

"So, I would say that there is a change in terms of transparency on the educator side that at least when it comes to online engagement, I can see how much students spend on the, how, much time they spend on the module side. Have they engaged with some of the core materials, or they haven't yet? And yes, so I can then refer them back to I answer their questions and reiterate that, you know, under week six, you can find all these materials." (D11)

As mentioned before, a reason for which controlling becomes important is that the flexibility of working spaces and times makes private and professional life overlap: this motivates affect emergence in controlling. Directly linked with the identity argument that will be advanced in the next sub-paragraph, with the topics of theme Four, and with the content of the sociomaterial influence of the context discussed in the first theme, dealing with personal reason, that may or may not pertain to the strict sphere of the personal life of the worker is something that must be considered while thinking about how to organize a working day schedule, according to the interviewees. Controlling as a working practice becomes affective through its interaction with the private and professional life of the worker. In this regard, D8 told me this when I asked him about his working schedules:

"So, I have a good sense of what's happening and we can.. I can just move things around very, very quickly. You know, just my professional life. Right. So we have a shared calendar with my family. So, every time there's a family thing, people can get it, get to sort of lock out spaces in the calendar." (D8)

In the same way, when I asked C3 how she felt about the separation between working and private life, she answered:

"So I, for me, it's very blurry because I have access to my work. On all my devices and because I love working and I do not have family by myself in, in, that I don't have a husband and kids. So that (the boundary between private and public life,

note added by author) it is really blurry and for example I received an email for tomorrow and I answer so and actually this is also kind of work. And it's your Sunday, it's my Sunday." (C3)

Thus, she highlighted how personal factors such as having a family could directly affect working practices. Another example of this situation is from B8, as he confirmed it as we were talking about one of his typical working days:

"I think understanding the fact that family members are an extension of a person is critical. If you want to move forward, you can't ignore that aspect of your employee. Like I said, if I was given a choice, I would say, right then I'm not coming to work because of my family. Whereas if work says don't worry about it, you know, try your best, then I will try my best and it'll be what it will be." (B8)

In this regard, B1 referred to the fact that knowing the private lives of the workers is important to know where the research team is placed in terms of working capacity, to be able to organize more effective working strategies:

"Do I need two people in one person to do it, etc.? And then I might want to challenge with my team to say, Right, this is coming. I need this is what we need to do. So how you know, how you know a typical manager interaction with someone, I like to say could be everything, from this is what we need to do over the next four weeks. But I also want to check house things with you. Have you got any holiday plans? Yeah, etc., etc.. So, so that's a typical in a daily role for me." (B1)

Dealing with personal reasons is therefore a fundamental factor that makes organizing working days a continuous accomplishment for every single worker. This involvement of personal reasons in the definition of a working day schedule connects this sub-theme with the next one.

2.3.2. The impact of Identity perception for Controlling and Technology use.
From the data, it emerges how digital technologies impact identity perception, and how this encounter makes the practice of controlling important for self-management at work. Identity is thus a factor that influences how a working day is organized, or the choice of the topic to work on a specific occasion. Identity becomes therefore a focus of attention for affects emergence in controlling. For instance, the ways in which one identifies interacts with forms of communication or other technological interaction, and all play a role in how a working practice is managed. To make an example, when I asked D10 about how ChatGPT was impacting her work with her supervisors, she said:

" And then they suggest a very well written email that I could use and that, for me. So, I think it just makes me seem professional in the eyes of my supervisors and is also very good for me to do some paraphrasing. Yeah, no like, this is like you all know that, because like paraphrasing is very important especially when you cite somebody's work but you cannot

write exactly what they said in their journal you need to rephrase and my I'm not I'm not really I'm not very confident with rephrasing so I kind of like resort to chat GPT" (D10)

To mention another example in this regard, coming from the industrial settings of my interviews, C5 told me this story when I asked her to explain me how she felt about a new management software they just adopted, which was changing her management practices:

"So how does it make me feel? It makes me feel proud, because it's a piece of software that we pay for efficiencies. It shows that we've got a proper business, because we've got several people. It makes it feel like a proper business owner managing people. It is a relief because now we do have to be having these various phone calls, need to be kind of keeping spreadsheets of people's leave and wondering, has that been updated, has that not been updated?" (C5)

Directly linked to this condition, the results suggest how technologies can make users feel more or less at ease, because of the interaction existing between identities, technologies and management (thus, control) practices. I would like to stress how this aspect of the interaction with technologies also relates to the creation of affective communication analysed in the first theme, with its subsequent necessity to establish relationships with customers and colleagues, which is also a focus on attention on the practice of persuasion in the form of trust building.

To keep using extracts from the interview with C5, in this regard she said that technology:

".. Allows me to, it allows me to harness my strengths, and it allows me to make accommodations for my weaknesses, I guess. So, yeah. It allows me to focus on tasks like breaking my flow allows me to manage self-care so I can be more productive. Um, and it means that I'm a lot more efficient. So, while I'm really busy being productive, something, I'm not missing opportunities for efficiencies later down the line." (C5)

In this last excerpt it is possible to appreciate how efficiency is a motivation for affect emergence in controlling practice, as this motive interacts with identities in that practice. This motivation is shared with Theme 4. In this regard, also D10 made positive remarks about how the use of technology made her feel in his professional relationships:

"so yeah, I think firstly conserves my time. Secondly, I think meeting online can, can help me to kind of like how to say, reduce my anxiety when it comes to talking to my supervisors, even though they are very, very friendly. I still have some sense of like, I'll just like intimidation when they when I meet them. It's not that I'm scared of them. It's just like I feel a little bit intimidating. But when it comes to talking online, I am more open. I don't feel shy, and I can express myself better." (D10)

Technology can have also negative effects in this sense, according to the interviewees. Teaching online, for instance, can make students feel worse because of their inability to show the validity of their work to their supervisors. D4 told me about this:

"But at the same time also there is, this more fear in you, like what if something goes wrong and I don't have control over it and it's kind of, you're just putting it out there in the world. So, there's sometimes that for you, like what if something goes wrong? But that's why we try and break it down into smaller samples that even if one batch is bad, you can then correct it. And that's why I didn't again feel okay with the process." (D4)

Therefore, also this capacity of technology to make users feel at ease while using it, is related to how identities intervene in the unfolding of a digital working practice (in controlling), as technology use is entwined with qualities of the individual. This condition is also confirmed by how, in a communication realised in a working context the nature of the communication as personal or private can be important to establish affective relationships. In fact, if the persons communicating have the chance to know each other better, to know their real feelings and emotions, therefore, to know aspects of their life related to their professional or private identities, then controlling and managing can develop in different ways than initially predicted. When I asked B7 how he interacted with his colleagues around the world with the use of technology, he said, at first:

"So a lot like we're doing now, which is using, using Teams (i.e. a software for real time organization and communication), uh, to, to, to talk either when I'm on or in larger meetings, uh, often just audio. If I can encourage people to be face to face. Some people are reluctant to use the video. Uh, but I would say, um, that using Teams enables me to meet more frequently with those people and, uh, I particularly, I think the video aspect helps me to build better relationships with those people and get to know them a little bit more." (B7)

Another example of this can be found in the interview with A8. When I asked him how continuous communication changed his working practices, he replied:

"Yeah. Um, I mean, it might sound a bit better sometimes than, say, I'm just keeping contact to the person because I think it might be helpful someday. Of course. I mean, it might also happen, but it shouldn't be usually the case, right? So, because some of these people you, you even all create friendships maybe. Yeah. And so that, you know, you just stay in contact even on a private basis yeah and um, but even if this is not a fact, I think it is." (A8)

Lastly, technology and identities interact in a working practice in relation to factors such as social and gender roles, and about how these factors can perform a role in the development of a working practice, which then become part of the focus of attention within identity (and ethics) as central point in

controlling practices. According to the data, the influence of these factors can help (or hinder) the ability of the user to feel less or more at ease by establishing a specific form of communication at work, by either using communication technologies or not. For example, when I asked D10 about how a specific technology was changing her working practices, she said, quite explicitly:

"So we got lots of extra PowerPoints (i.e. software used for presentations) in so that I could have Google Nest (i.e. smart home products). And the Google Nest has been revolutionary for me because I am [condition]. So it means that there's a few things going on with harnessing my brain. First of all, when I focus on something, I focus on with hyperfocus and I hate to be interrupted." (D10)

After a couple of minutes, she continued:

"Let's talk about my digital technology. So my Google Nest allows me to be efficient, that allows me to be productive and it allows me to harness the two strengths that I have, which is hyperfocus and a very busy brain with lots going on. And so, yeah, and perhaps that's identity rather than values, perhaps that's character rather than values." (D10)

Ultimately, also considerations about gender roles come into play in a working practice. A9 made this remark, as we were talking about how she connected with her colleagues to work:

"Um, it also helps to be a woman, because they are not that many women in [TechCorp], in engineering quality. So, um, women are even more helpful with each other. I mean, everyone is helpful to everyone else. But with women um, especially if you want to make a career, as a woman, um, you network with other women within [TechCorp] in relatively high positions, and then they help you advance." (A9)

Another crucial factor that influences the development of digital working practices are the sociocultural characteristics of the human actants, an argument that informs the next and last sub-theme of this second theme. Even though this last sub-theme is directly related to this one, it emerged from the data with a specific prominence, thus I decided to dedicate to it a separated sub-theme.

2.3.3. Technology and Culture. How sociocultural assumptions influence controlling as a working practice.
Technology interacts with sociocultural positions of the participants, thus with ethical aspects of working, because from the data it emerged how participants coming from different places and cultures managed tasks differently, thus influencing the practice of controlling. To mention an example in which sociocultural conditions interact with use of technology at work, D12 said, in regard of his use of voice recognition technology to record the transcripts of the interviews he made for a previous research project:

"Obviously you're going to have to sift through an edited and, you know, collected and it might depend on, I would hear different accents and various things, but you know, things like that which are only getting better because, when I think of

some of the voice recognition thing that we used to try, you know, 20, 25 years ago and it was it was useless, you know, it was Scottish accent. No way, we don't, we don't pick these up, Australian accent. No way. You know this and it just wasn't worth it you know, because it was painful stuff. Whereas now, you know, we use that for you can use it on Zoom." (D12)

When I asked B2 about how the use of technology could help him in solving problems, he told me that technology could help colleagues to bridge communication difficulties that may occur as team members might come from different cultural backgrounds – thus making controlling easier or harder to perform, depending on the situation:

"It's, it's hard to do that even in, in that kind of technology. So, when you are there, um, so, you know, a couple of weeks ago I went to Philippines this in one of our manufacturing plants and I, I, I had a completely different conversation. I had a completely different conversation when I was there versus when I was using the.. you know, it's.. is very kind of, um, you know, I, I think it's cultural as well. So, within our, our culture, I think it becomes much more formal, formal conversation. I would say it if it's done over these kinds of technologies. But when you get there, um, yeah, it just changes the conversation, which would be very helpful. You get up really, um, subsequently you cannot substitute that, um, because you get information that are critical that you could have not gotten otherwise." (B2)

To show another example in this regard, D5 told me that:

"And lots essentially from.. he already knows about us. So um, when it comes to any type of social media, I'm careful about oh, about the information I'm receiving. Although I mean the research articles, solely research articles, but the fact that I thought in the first place, depending on the choices I've been making online before, playing into my views and playing into maybe my political tendencies and all these things, I'm aware of that." (D5)

From this situation, it comes the fact that the specific working culture of a specific organization must come to terms with the social, cultural, and sometimes, even political tendencies of the workers, as it is reflected in the codes, to enable effective control. This means that different understandings of work and organizing that are typical of a specific culture plays a role in how a working practice is executed, thus culture, both local and foreign, becomes a focus of attention in controlling practices. The interview I made with A3 contains a good example of how company culture and personal culture can collide, and how this situation is relevant for the practice of controlling. As we were talking about how the new employees were learning new capabilities in the context of his research programs, A3 told me that:

"Right. So this is all kind of a cultural thing. If you ask people around that are with the company for many, many years, especially in the US, they used to do things in the same way for years. And if you can if you can, I don't know, get this kind of cultural transformation be done, um, maybe that's something." (A3)

In another excerpt from the interview, company culture was a factor to be considered when realising a merge between companies:

"So they buy a company normally, they buy companies who are very successful in this specific area, which are in a healthy shape. But then you have this cultural.. this culture of a .. cultural thing, right? So my experience is, you know, organic growing needs a dedicated management about culture management. So the company is, I can tell you, I level from examples." (A3)

And then he continued:

"Right. So this is, to my mind, local culture clashes a little bit with a global culture of a big company like [TechCorp]. On the other side, the local culture is an enabler for the local team to be successful, and this requires a very clever and smart management to get out to the best of the two worlds, right?" (A3)

The interaction between local and company cultures entails a situation where different local cultures can impact how work is understood and, consequently, executed. The next excerpts exemplify this case. As we were talking about her working practices, D1 told me:

"My interpretation of that information, though, based off my expertise that I developed over the years that I worked there, was going to be fundamentally different than somebody that was in Sweden that didn't necessarily understand the FDA or didn't understand the US consumer segments or, you know, that sort of thing." (D1)

Moreover, according to the interviewees, culture and work can interact as different working cultures can make a product more or less valuable for a buyer, as its culture can affect the use that it is going to make of such a product. Culture can determine how the value of an item is calculated. In this regard, A17 said:

"I think what you are talking about sounds.. very well involved with anthropological discussions of value.. because like, as you said, can you imagine or not, this is not like it's okay to measure value. Like anthropologists, just goes out to places where people are exchanging like fishes or stones. And so they couldn't figure out like, why are they doing this? What is the point of them.. like from like an American perspective you can't really understand, you need to understand their context." (A17)

I will now proceed to explain how the sociomaterial agency of digital technologies is changing the outcomes of working practices. The creation of knowledge is, in fact, becoming more important than the creation of the physical products which should be created with that knowledge.

2.4. THEME 3: WORKING AS ACTIVITY OF KNOWLEDGE CREATION. *Practice: searching.*

Picture: Technologies are changing the focus of work, from physical outcomes to knowledge production. The ability to work intensively with knowledge-focused devices thus becomes paramount in this context, and the atmosphere of this picture reflects this situation.

For this theme I have been able to create three sub-themes:

- *Knowledge-Centred working: the relation between activities of Knowledge Search and Creation.*

- *Producing Effective Knowledge: Aiming Working Practices at the Production of Meaningful Knowledge.*

- *Knowledge Creation as a Technologically Enacted Endeavour.*

2.4.1. Knowledge-Centred working: the relation between activities of Knowledge Search and Creation.

As digital technologies work on data algorithms, knowledge creation becomes the focal point of many research practices, in both academic and industrial settings, that sees this endeavour as even more important than the production of the goods themselves. In this context, according to the results of this research, the practice of searching is becoming fundamental, and the one in/for which the highest number of affects emerge.

As the operations of establishing affective collaborations with internal and external stakeholders are interrelated, as I have shown in the first theme, also activities related to the search and creation of knowledge at work are connected in the same way. This is because the process of working together to understand how to maximize value production for both company and customer is an ongoing procedure, according to the results, which entails a continuous process of mutual influence between the practices of creating knowledge and looking for knowledge already created. The creation of these affective collaborations through networking becomes therefore a focus of the attention in which affects emerge in the practice of searching. In this regard A3 told me that:

"So, this is a high-level deliverable that is expected from our work. And, and we start like with, okay, what do we know already in the company about this topic, right? And our work starts with reaching out to what we said, then identifying with the stakeholders. So maybe there's a group within […] or in who already have domain knowledge." (A3)

Then he continued, after a couple of minutes:

"So normally we have a team of four to five people. We have prem.. some session where we make the conclusions right of what we have learned and where we got the creativity part. So where we see, okay, what is the problem with this topic? How big, how could this problem be solved and where are the opportunities? And this like this is where the team sticks together and tries to create something new out of the learnings we have." (A3)

To mention another example, D9 told me that:

"Well, I think that brought both pros and cons, so it's so much it, I think it's very good for productivity. So much easier to find stuff. I remember when I had to flick through an encyclopaedia for ages to try and find some information, and it's like a massive book for it only have a certain amount of information which now you can go on Google, type in any sentence, and have hundreds of thousands of millions of articles literally within seconds of thinking that it has been massive for productivity." (D9)

In what does these activities of knowledge search and creation consist of? From the side of knowledge search, many participants focused on the importance of identifying problems coming from the already existing literature, and to carefully read the market to understand its needs, so that eventually it would be possible to understand how to create value for the company and the customers. Problem identification becomes therefore a focus of attention in the searching practice, and value creation a motive for affects emergence. A14 exemplified quite well this process of information search in this excerpt:

"Yeah. So, first of all, I mean, I need to work with the fragment on identifying the problem spaces that exist in the market and how we do that. I mean, I'm researching them basically in the literature and via Google and so on, if I find existing

analysis in terms of these things or maybe we do have some research, see as well, and (a person) one of them. Maybe they have worked with investigated market problems already that fit into the portfolio that we are supporting. So that's the first piece. And then we have a kind of a list of market problems that we that we found out. And then next step is for us to really get in contact with the market basically through doing interviews like what you are doing." (A14)

There are many ways to carry out the searching practice. One, for example, is studying the market to look for project opportunities instead of directly asking the customers. In this regard, A4 told me that:

"We are also looking at the competitive landscape around and say what other products are out in the market that do something similar to the product that the product manager is using. They might know their competitive space, but we take a look at it as well. And say, you know, are there companies out here doing something similar to this?" (A4)

As declared by the interviewees, all of these activities are ultimately related to value search, which is, to understand what the real value of the project for both the company and the customer is – again, this is therefore a motivation for the practice in which affects emerge. As this is an operation of knowledge search, as previously stated, this practice interacts with the activity of knowledge creation. Value creation and value search as practices are therefore related. To use another excerpt from the interview with A14, when I asked her how internal and external practices of value creation are connected, she answered that:

"Okay. Yeah. I mean you know most of the people yeah. Really as you said, focused internally and but if you're going to, you know, in the end it's all the money counts, you know, you want to sell the product, you want to create revenue and you want to create value for you but also for the market. I mean, if you just develop something because you don't know, you have it internally, but it doesn't bring money. And so it's I mean, there are a lot of examples of who do it this way, but that's not what our goal is. We really want to create value for the market. And if we then have like a lot of good revenue and customer and so on, we also have good arguments internally then why people should let us do the book if you will, and should give us *I mean, we also have internal like processes, gates."* (A14)

Considering the climate of constant uncertainty, any occasion can be considered valuable for knowledge (and value) production according to the research participants: casual meetings at the office coffee machine, other than planned internal meetings, can become useful events in this regard. Networking in person occasionally contributes to the focus on networking of the search practice in which affects emerge. This excerpt taken from A16 gives an example of how knowledge creation depends on knowledge search realised through encounters with colleagues or externals. When I was asking them how they use to work with internal and external customers, one of them answered:

"Internal and external customers working with, you know, the contacts in the network that we have for both internal and external customers, I mean, it depends on the project you're working on. It depends on what kind of input you're looking for. But each one of us has kind of a network of people that we know throughout the business for different internal contacts, as well as working with stakeholders that, you know, have contact with externals and [clients] they work with and, you know, setting up interviews with these people to talk about specific subjects as is that what you're looking for?" (A16)

Thus, the chance to meet informally to discuss these matters is important to create knowledge because it makes possible to obtain it from different sources. This capability is strongly related to the sociomaterial agency of working spaces, and with the capability to collaborate. The agency of working spaces will be treated in the next Theme, and the capacity to collaborate has been treated in the previous one. In fact, meeting in casual meetings also contributes to the creation of those affective relationships that, as it has been analysed already, are an essential part of a good working collaboration and to value creation. When I asked B1 he told me that:

"But for me, it's an extra step. It's an extra complexity. I have not found away some of the things being able to very quickly say, Hey, Marco, are you free for a coffee? We talk and then send out Microsoft Teams. That for me I find very useful.. because I'm reasonably well connected and I've been approximately for 20 years. If I want to find some information and I normally know, hey Marco, can you help me." (B1)

2.4.2. Producing Good Knowledge: Aiming at the Production of Meaningful Knowledge.
As knowledge production becomes the focus of working as technology agentially participates to the agencement of working practices (with searching becoming its fundamental practice) working is also becoming focused on the production of effective knowledge, which is knowledge provided with a high degree of operationality and depth of information, that can be meaningfully employed for production purposes. Technologies can influence this process as they can control not only the ways in which knowledge is created; but also how its content is modified, according to the interviewees. As it will be now analysed, this effect is also linked to the capacity of searching knowledge. The production of effective knowledge thus becomes a motivation in which affects emerge while practicing searching.

Many factors can influence the quality of knowledge created. Working in uncertain contexts, for unplanned tasks, can be sources for the creation of superficial knowledge, that will not eventually be a solid resource for the company or the single worker. Therefore, according to the participants it is important to have the capacity to focus on specific tasks given an uncertain context, to create effective knowledge. Another important factor in this regard, are working connections (which make this theme relate again with the first one): connecting with former colleagues who are experts of the topic studied

can affect the quality of knowledge created. Thus, not just networking, but uncertainty too, become focuses of attention from which affects emerge in knowledge search, and they are therefore connected also to the production of effective knowledge.

To make an example of how this motivation can, in this case, be influenced by technology use, while we were talking about his use of the scrum methodology to work with his colleagues, B1 told me that:

"I run quite a big team. I've got kind of 30 to 40 people that I'm trying to manage and keep productive. So, on that scale, the scrum methodology is rarely - do I want all of those 40 people working on one activity -. So now within that team, if I've got a team that owns this part of the pilot plant capability and we say, right, there was a new piece of work that we need you to go and help with. We need to make some product. We need to understand the process conditions. We need to analyse the data that so part of the team might be very useful to say, right, this week, that is your job. I don't want you distracted by anything else." (B1)

As a matter of fact, many interviewees reported that creating superficial knowledge is a risk that should be avoided when collaborating. To refer an example in this regard, A3 told me that:

"The downside of that is you become a highly expert in a certain topic for a few months. You will never reach most of the knowledge. That is to the expert with the explicit topic for years. Right. So, what I want to say is, sometimes I feel a little bit scratching only the surface and that hides me or prevents me from being really innovative, because I only see the surface." (A3)

Thus, another factor that can affect knowledge creation in a collaborative environment, is the degree of personal experience and previous knowledge on the topic that some colleagues might or might not have. A focus for searching becomes therefore also networking for taking advantage of this already existing knowledge pertaining to experienced colleagues, and affects in fact emerged in this context too. As we were talking about how he created social networks for his work, A7 told me that:

"Okay, So just to give you a more general, but also the first is in being the position where you want when you want to have the conversation with an expert. That's the first positive when you've identified a problem in the situation, when you're in a situation when you need a verification with an expert you need to hear the opinion of an expert in a specific dispute. So the first is to identify the right expert to talk to, what.. Exactly. In and what the relevant question to answer to identify it as much as you want you want to talk to and find a medium.." (A7)

As previously stated, the capacity to focus on a specific task to create effective knowledge is also dependent on the sociomaterial context in which this practice takes place. The uncertainty that comes from this situation can also affect the creative capacities of the worker, as it requires him/her to keep re-

focusing on new tasks – thus influencing their searching capabilities. As I asked A1 how he felt about the situation of constant change that characterised his daily working practices, he stated:

"Ahem.. And to me that makes total sense because the I mean, we are assessing really early ideas, so there is a lot of uncertainty. Um, and you do have to have a method to be productive in that, in the uncertainty in that world of uncertainty. So, um, to me, I, yeah, but iterative process getting together every day and refocusing makes.. makes in our environment total sense." (A1)

In the first theme, it has been analysed how an uncertain working context, because of human and nonhuman influence, is an agent that should be reckoned with when thinking about collaboration in a digital working practice. In the second theme, this argument has been further developed from the side of the individual worker, by putting forward the claim that, for this reason, new ways of organizing a daily routine were now needed. For this third theme, the data shows how this condition can affect the quality of knowledge created; working on always new tasks, as a matter of fact, can be a hindrance for focusing on specific studies and research projects, with evident repercussions on the quality of the final products. Yet, for this practice uncertainty is a focus of attention for the practice of searching, rather than one of its motivations. A15 (Industry) stated that:

"Uh, and one here I have to set up a new stable of work every year and, um, and so there's, uh, and so my work is within like, and which work packages I should support. [… what exactly I should, uh, provide to them specific documents, prototypes, whatever. That's the plan. But actually, I am, um, it's like I'm working on every book package from […] because my supervisor just told me, okay, we need to do that."* (A15)

In the next sub-theme, I will explain how technology takes direct part in this process of knowledge production, and how without its use it would be impossible to obtain the same work output.

2.4.3. Knowledge Creation as a Technologically Enacted Endeavour.
The data I have collected evidenced that many interviewees assigned to technology an active role in the production of effective knowledge. They thus identified it as more than a simple working tool. Because of its capability to enable activities such as knowledge search and communication, Workers consciously think that technology is an active agent in knowledge production, aside from considerations in regard of its affective power. Technology is therefore another focus of attention in the posthuman condition of creating knowledge, around which affects emerge.

Technology can intervene in many ways in the sociomaterial assemblage of a working practice. For the ends of this sub-theme, as aforementioned previously, technology can intervene in the production of

knowledge as it affects the capacity to focus on certain tasks, but also because it can affect the enactment of working practices in terms of freedom of activity (therefore, the capacity to decide where, when or what to work on, considering the spatial-temporal setting). Many interviewees related to this factors capacity to focus on problem solution, therefore, on knowledge production in industry.

To make an example how digital technologies affect (either positively or negatively) the capacity to focus on specific tasks according to the participants, B2 told me that:

"Of course, whether students engage with that, that's a different question because I think one of the challenges we see, not just in academia, is that there's a lot of distraction. So, if online and we're (the students) really going to look at what I'm supposed to look at, what am I going to go to YouTube for or Amazon Prime or Netflix? And so I think there's competition for attention, that is happening as well." (B2)

This happens because technology give users too many chances to get distracted, according to the results. Yet, this freedom of activity given by technology can also have positive effects. In quite a mundane way, B3 said in this regard:

"Right. And I'm talking very simple things like even, even like I think it's more the access by themselves. And if I, if I think of something overnight when I'm outside of work and I want to quickly check, you know, I just do it on my phone, right. And, you know, that we forget about and that's something that probably someone a scientist or several programs wouldn't be able to do. Right. So that for me has been a is quite an asset. And the second one, technology is the uh, structuring for making structured data that is not a, and because now we obviously we have the capabilities to store so we generate data constantly, but now we're able to store it and we started to store it in a way that is smart enough. That, you know, we can go access it easier, right. And it and sometimes actually create modalities. we're not the only look at the data. They will actually look at conclusions or look at trends, which is the.. they save you a lot of free work." (B3)

To make an example of how this technologically enacted freedom of activity can be detrimental for knowledge production which involve knowledge search and communication, aside from the fact of focusing, another example can be the one provided by the interview with B9. He said:

"I've had it recently. Something went wrong with my laptop. It wouldn't give me access to our systems. That was my work. I couldn't get any of the files or any of the documents I've made. And so, you know, I was stuck for an afternoon until my laptop came back online. So and.. also like I said, like simplification for simplification sake." (B9)

This topic is also related to the creation of superficial knowledge, an argument treated in the first sub-theme.

To reinforce this position, the results shows that, to work properly and create effective knowledge, it is vital to be able to manage technology and to choose the right tools to work with. Managing communication softwares effectively can, as a matter of fact, have a huge influence on the enactment of a determined working practice. About this, A5 told me that:

"I use something called MatterMost (an online chat service), which is the same kind of functionality. And then there's WebEx teams (a communication software) that I use for some of my teams to move Teams to, and that's three, and the challenges is, not everyone I talk with is on the same platform. So that makes it difficult because I literally have to have three applications open monitoring feeds as they come through and that can be challenging." (A5)

A consistent part of this managerial task consists of getting access to the right tools to enable knowledge search. B3 made this very clear in this excerpt:

"And because we didn't have the technologies that are available now, um, were not there, that meant that the, the progress of innovation was a lot slower and the 8 hours that you spent, the day, was spent very differently 20, 20 years ago, right. I think so. I would say for me, you know, some more got a millennial style millennial scientist and for me Internet is essential. Right. I think a big you know, I, I do I do acknowledge that, uh, for me, the access to information, you know, and this is all sorts of information, good, bad information, just the access to it, 24/7 you see is extremely beneficial, right? I'm saying, you know, it's that you said and it really enables me to perform my job." (B3)

In this context, learning is an activity that is becoming increasingly dependent on technology use. In this regard technology, can, for instance, be used as a storage of data that can be consulted. In this regard, D7 said:

"Basically, both in-class lecture and what they have access to online are linked to each other. So, so the lecture that is delivered in the class using a PowerPoint slide, for example, so that PowerPoint slide is available to them on the same platform. Why is it available there? Because they're expected to, you know, access it at home. So, both things are linked to each other, the classroom delivery as well as what's available online. So, I would say other than Kahoot! (an online based learning platform) other than Google Drive (an online data storage service), other than uploading their assignments through Moodle (an online learning management system), for example, they expected to log into Moodle or the Blackboard (a software used by universities to help students to administrate their student life) regularly to be able to access the lectures at home as well as the assignment brief as well as the module handbook." (D7)

Ultimately, as digital technologies can decide how a worker carries out a certain practice, it means that they can also decide the topic and content of work, according to the research results. Deciding the topic

of work, as problem identification, is thus a focus of attention for searching as a practice, and affects emerge around this motive.

In any case, even when the interviewees said that the topics stayed the same, notwithstanding the use of a certain technology, they still recognized the role of technology as a deliverer of that topic. In fact, depending on factors such as the availability of a certain technology, the working practice will be aimed at reaching the production outcome that it is possible to achieve by using that technology (es: it is not possible to measure weight by using a rule). D6 expressed this thought as we were discussing his working practices:

"Yes, because if you check econometric models, that is being several improvements. So, econometrics is quite recent, at least in economics compared to other kind of analysis. Yeah. It's you have some models. So, you have different models, different analysis, but this can be done because of technology. So the stronger is the way of computation, the more extensive and more.. how to say, more complete is also a way for study. So okay, this is a good progress in data analysis, but on the other side, too many data and the way or interpreting if you do that, clear career path at the beginning that would mislead interpretation of the.. of the results, so." (D6)

After considering the role of technology as producer of knowledge, now I will move from this topic to analyse how spatial-temporal coordinates of the sociomaterial context are becoming increasingly important in the definition of a digital working practice.

2.5. THEME 4: WORKING AS A SITUATED ACTIVITY. Practice: choosing working places and times.

Picture: Technologies are making the choice of working time and places important for working. In this picture, the presence of a bag suggests how the workstation depicted here is only one of multiple ones for this participant, contributing to create an atmosphere of precariousness.

Only for this theme, I have chosen two different sub-themes:

- _Relativity Matters: The Entwinement of Space and Time in a Digital Working Practice._
- _Working Spaces and Locations as Affective determinants of Working Practices._

2.5.1. Relativity Matters: The Entwinement of Space and Time in a Digital Working Practice

For various reasons, technologies are making spaces and times active agents in the definition of working activities. The practice of choosing time/spaces to work is thus becoming important because of their agency.

To explain why, digital technologies can change the time and space of working practices because workers simultaneously work in different time zones. This eventually has repercussions on time rhythms and flexibility of working places, which can affect the capacity of the worker to create knowledge. Time rhythms are thus a focus of attention for that practice, in which affects emerge.

To make an example of this situation, A10 (Industry) told me this when we were talking about the meetings he had:

"So yeah, in case we have a team of one or more team members from, from the U.S. Of course, our scrums occur in the afternoon like the mornings. Then we sit together, check out what we have all over the day and the day before and again make a plan on what the next steps that you're seeing. And so, all the rest of the team members has the advantage of having a mixed team, the US team then can, can interview or have meetings with our stakeholders over the day so we can just rely on having them reckoning those tasks and we, we are performing more the administrative and, and creativity tasks." (A10)

Flexibility of working places thus is a focus catalyser around which affects emerge in this practice, shared with Theme 2. C6, in this regard told me that:

"Ideally, nobody is in the office on Mondays and Fridays, but you have to have the space and everything. for these days as well, because you can book in only for three days. So, I think if I, I, what would I experience out of that is that it's that we have to find other ways in meeting up and be creative together. And this is necessary and to say you have to be at the office two days a week.. which just might not work. I think it's too formal, but I agree on the understanding that it is a benefit to meet in person to get a better understanding and the more trustful working. Yeah, working together." (C6)

Work routines as patterns of activities to be carried out in working practices can be decided depending also on spatial factors, and therefore where workers find themselves can determine a work routine (which, as I have described already, can itself decide the topic of the work and the form of collaboration enacted to achieve it, which unites this theme with the previous one). To keep referencing C6:

"So if you sit in another country, but you have more or less the same time zone, this is exactly the same time. So it's even easier because, you don't you don't need to organize around different time zones and that's just another benefit. If you can be in winter times where It's very cold in UK and Germany and so on. And you could work, for example, from the south side of the you from South Africa. That would be another beneficial idea and opportunity. I would say, at least from my perspective." (C6)

By following the results, this interaction between space and time in a digital working practice can be a contributing factor not only in the determination of the flexibility of working spaces, but also in the definition of working rhythms, intended as the frequency of working activities. As working time rhythms can affect working practices, it is important to notice how this frequency can affect the quality of knowledge created, given its capacity to make people work together for certain amounts of time in determined spaces, regardless of their digital nature. B5 provides an excerpt exemplificative of this situation. He said:

"Okay. And I mean, for me, I like to have not too many meetings and have time to think and read and write summaries of my work. That helps me to kind of get clear on my on my own thoughts and insights that are coming from my work. I

need a team to do these things. So, I would prefer we had fewer meetings, but obviously we need to have some. So, for the ones that we do have, I think it's important that they're as efficient as possible. Um, and that, yeah, the objectives of the meetings are clear. They're structured in a way that everyone can have a chance to speak if you need to." (B5)

Efficiency is thus a motivation for choosing space/times. In this regard, many interviewees referred to the fact that also time-related factors could determine the collaboration and whose who took part in it, thus defining the unfolding of that practice. To mention A10:

"Let's see. So that's how it works, quite often. So when we meet in the afternoons and mornings then we agree on which persons need to be contacted or yeah. Yeah. To be interviewed or I don't know. It's usually like in 90% of the cases that has them that those persons are U.S. citizens as well as working in the U.S. So, it's very comfortable that our U.S. team can then take up with them because, yeah, they have the for 8 or 9 hours to talk to them and just 1 hour like us." (A10)

To maximize efficiency, choosing spatial and temporal working coordinates can determine the content and outcome of a working practice. To refer C4 in this regard:

"I'm done when I'm getting home or when I'm in the car.. Or if you are, you need to have like a proper train to work. If you are sitting in a train that's like so, you know, back and forth, I get travel sick. So I cannot write or read and I only thing I can do is take a call, right? So that's why I write this as well." (C4)

Aside from its relationship with time, there is another aspect in which spatial dimensions can determine a digital working practice: its capacity to be quiet or lively, thus, to elicit specific atmospheres. This aspect is also related to time (working at night makes a difference on working capacities also because of the different atmosphere of the workplace). The next paragraph will be dedicated to this topic.

2.5.2. Working Spaces and Locations as Affective determinants of Working Practices.

Technology use at work makes the atmosphere of working environments a factor in defining working practices. Spaces can influence a digital working practice not just as they interact with time, but also as they interact with the worker itself. As this happens, the results suggest how spaces create atmospheres capable of influencing activities such as individual research or collaboration in meetings. Atmospheres become a motivation for choosing space/time locations and affects emerge here. B7 in this regard, told me that:

"Can I, yeah. Can I make a distinction as well. Just might be interesting. This basis distinction is probably for me, which is the distinction between working from home and working in an office or working in a lab. So, um, even though two thirds or three quarters of my day might be talking to someone on a laptop like this I find that much more of a struggle from home where I don't have other people around me. I don't get, I don't, I don't have that the energy that comes from being surrounded

by other people, the technology can't do that for me yet. Right. I know that being around people is important in that sense. Okay. And it's the same into the biology, right? You know, you're in there with other people." (B7)

On the other hand, many interviewees evidenced how working from home was for them an asset. This is what B8 told me about this:

"So I work home three days a week and it works basically. They gave me they gave me.. it was like a fund where I could buy some things so I could have a proper, proper check for the rest. I've got like a little desk and stuff. So what? I'm perfectly fine working at home. And then I have the.. because basically, you know, that's, that's where I focus a lot of my quiet time on the I do have meetings on teams and stuff, but generally like today I don't have many meetings at all. I would just focus instead on just sitting there quietly, do the other stuff. And then on like three days a week I go to the office and that's where I kind of reinforce the interactions with my colleagues." (B8)

From this excerpt, it can be noted how the affective atmosphere of a working space is related to work performance, thus efficiency, according to the interviewee, as it can affect the capacity to focus, thus to create knowledge; this reconnects this theme to Theme 2 also in this aspect. In general terms though, it can be said that working spaces have the capacity to determine what a worker is going to do, as it affects its capacity to work on determined tasks, given the presence of a determined atmosphere. These characteristics links the previous narrative with this one, as well. To make an example about how spaces can affect the capacity to work by affecting the capacity of the worker to focus, B5 said, about working at the office:

"I mean, I want to concentrate. Then I come into the one with the high partitions, and the other one to sit, and just to make sure I'm spending time with that team. But I think just I need to concentrate and the office, it's quite hard. I listen to music in my headphones on." (B5)

To mention B6:

"And then in the office we try to inspire something by putting products on shelves, washing machines on the side, things like that. That kind of give us inspiration, posters, etc.. But I think it needs to be renewed again, by the way. Right? So, the office, I would say is loud because people are taking phone calls. A lot of people are taking photos from their desks or something like that." (B6)

Another way in which the atmosphere of a working space help workers is by allowing them to work together. Working in the presence of colleagues or not is therefore a motivation for affects emergence in this practice, through efficiency. This situation helps the unfolding of a working practice for some workers because, aside from the advantages coming from the ability to enact unmediated collaborations,

the fact of working in a fast-paced environment in which many people are present can also improve the undertaking of individual activities. To cite D4:

"It depends on the day at the moment what rooms are not really available. So yeah, I usually work in some kind of open space. Or we book a room. Or I book a room like.. um. It's usually daily dependent on and more spontaneously where you do. So even, oh, this person is in school and then you kind of come together. But yeah, I sit somewhere in an open space and do my work from them and occasionally also have discussion with the others because we're all in a related field." (D4)

Working spaces have, thus, the capacity to influence knowledge creation as an activity, and for this reason, it can also contribute to influence decisions about the outcome of that activity. In this regard, A2 told me that:

"I think like for me, I believe talking with the people is the most important thing because when I sit in my cubicle, we don't have a cubicle, but I see a cubicle. I mean, I will sit in my space. I get a lot of information, a lot of things that are like relevant or not relevant, and maybe I'm not the one to decide which is relevant but is not great. So when, when I talk with a colleague of mine who has maybe like a different perspective, then he kind of gives me an idea like you have this kind of mix of this kind of does not like I to, you know, get my directions and then if you if you if you think like I in a shift and I kind of find direction by talking with someone and then they kind of see people because if you don't have a direction, you can go anywhere in the ocean, but kind of you are communicating with the people as it is finding different perspective, I guess, important for me. I see. So just so you think about I mean, communicating with people, with colleagues is important because it gives you direction." (A2)

To mention another example of the relationship between knowledge creation and working spaces, B9 told me that:

"But of course, there's all the different departments here as well. So, we've got designers and researchers and engineers all in the shared office clustered on kind of what projects they're working on. So it's also great to have kind of access to people. If I have questions on what I need equally is they know where to come and find me." (B9)

Ultimately, to draw a connection between this narrative, the previous one, and the second theme, as working spaces are agents in the definition of a working practice, this also means that they have an influence of how these practices are organized. Therefore, also working spaces have a role in the definition (or non-definition) of a working routine because of their atmospheres. About this, D8 said:

"So in.. so, it's like so we just say so you're saying that basically because are like in different places, organization is more of is it becomes harder because you are in different parts of the world now. I mean, is that so, is that the order the way things are different, the ones I, I get to lead there all different into the quite different you're trying to repeat some similar things so

how you organize them. and then there's yeah, then there's my organizational tie, my own work. Right. Because I think that that's where you question that's the question, you're asking me, It's yeah, it's, it's, it's tricky. Time management to me is, is essential..." (D8)

2.6. Conclusion.

After treating these four themes, which constitute the result of my data analysis process, I will now proceed to discuss these results and to present the model that will explain how the agency of digital technologies on working practices is enacting the emergence of affective value as intangible, thus of affects as intensities. After drawing the model, I will highlight how the results of this research project bring two original contributes to the respective literatures: the literature on value co-creation and practice studies and the literature on sensemaking in Information Systems studies. Eventually, I will expose the managerial implications that the results of this work brings forward for managers and practitioners.

Chapter 4. Discussion

1. INTRODUCTION.

1.1. *How digital technologies create affective value by changing working practices? Research findings and contributions to the literature.*

The results of the Reflexive Thematic Analysis (RTA) shows that the affective, sociomaterial agency of digital technologies in digital working practices enacts the emergence of affects (thus, affective value created as intangibles), by participating in the agencement of those practices, which is kept together by those same affects. My analysis shows that digital technologies are doing so by exerting influence on four posthuman conditions of working, as I found that, for each of these four conditions, affects emerged as circulating around specific practices. These are therefore the practices around which affects as value is present because of the influence of digital technologies on established working practices.

To quickly recap these conditions – which I named after the themes, these are:

- **Working as Working Together** (related to the practice "Persuading")
- **Working as Individual Activity** (related to the practice "Checking/Controlling")
- **Working as Knowledge Creation** (related to the practice "Searching")
- **Working as Situated Activity** (related to the practice "Choosing Space/Times").

The cumulative result of my research can be seen in the following diagram.
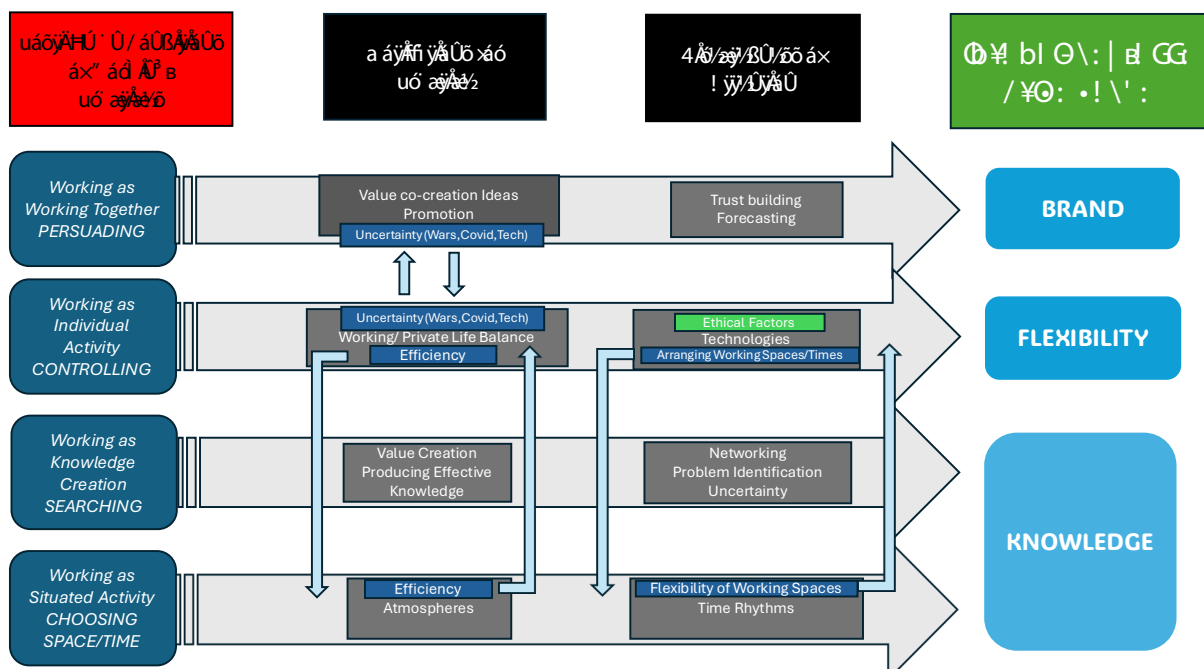
The Posthuman Conditions of Working are the circumstances of working affected by the agency of digital technologies, and, therefore, in which the affects as value are emerging. By following Reckwitz, digital technologies contribute to shape these Conditions as Affect Generators that participate in their practices (2016). Technologies do so by creating the affective experiences present in them (the affective atmospheres as aesthetic experiences, according to the methodological framework of this research), as they participate in affectively shaping the structural characteristics of the practice that according to Reckwitz (2016) allows affects to emerge, and by doing this, they contribute to form the practice itself. Technologies play this role in affect emergence in relation to these characteristics because these are not cognitive, but affective and embodied. Thus, the sociomateriality of digital technologies contributes to create the circumstances of working as Posthuman Conditions, as these technologies allows affective value to emerge as they influence these two structural characteristics of practices, and thus the practice itself. According to the model I obtained, practices become thus affective because affects emerge as circulating around these two structural characteristics of the practice, which are themselves in continuous movement as they are part of the "becoming" of the practice, as technologies contribute to shape these two characteristics in an embodied and affective way.

By following Reckwitz (2016), I thus detected how affects emerged in these practices in relation to those two structural characteristics (Reckwitz; 2016). These are:

- *Motivation for a practice*: it is an "affective incentive to participate in the practice" which can be a desire or an incentive that provides a built-in motivation structure;
- *Directedness of Attention*: it is what guides the attention of the human participants within a practice towards phenomena relevant to that practice.

(Reckwitz; 2016)

In this context, the findings reported how both Motivations and Directedness, and the affects emerging from them, can be shared among two practices: this testifies how two practices can be intertwined, as the emergence of affects coming from a specific Motivation or Directedness can influence the direction of that practice and make it switch into a different one. In this way, the model also shows how affects are enacted in the Deleuzian agencement of the larger Texture of Practices (Gherardi; 2019), in which every practice is contained, and how every practice is emergent from it. Eventually, the model shows how intangibles as affective value are created in each practice, according to the framework introduced in the

literature review chapter. In the next pages, I will expose how affects circulate around each practices according to this framework.

In virtue of these findings, as this research inserts into the literatures on posthuman practices, affects and information systems, it provides contributions around two themes:

> **By inserting in the literature on practices and their epistemologies, it enriches the literature on B2B value co-creation by adding an empirical posthuman practice-based study, which introduces a theory/methodology in this field based on an onto-ethico-epistemology that is ANT inspired and capable to account for the emergence and formation of affective value.**

This is the main contribution that this research brings. As it provides an empirical example of a practice-based study of value co-creation in the B2B context, it advances a performative way to follow the emergence of affective value based on a methodology/epistemology of diffraction, it introduces in the literature on B2B value co-creation a work based on a theory that explains how value is co-created in posthuman practices, which is also a methodological tool capable to follow the way in which value is created with the active contribution of digital technologies, thus enriching the literature on theories and research methodologies on value co-creation with a posthumanist perspective on practices of value co-creation. In fact, the field was looking for additions around the presence of this theory and this methodological tool, as the field of value co-creation is generally dominated by realist ontologies and positivist epistemologies (Saha et al.; 2022, Kohtamaki & Rajala; 2016).

> **By inserting in the literature on Sociomateriality in IS, this research contributes to the literature on sensemaking on Information Systems (IS). This research shows how the materiality of IS enables embodied knowledge, thus presenting sensemaking as embodiment on organizational phenomena (such as working practices, institutions, cultures and the technologies themselves).**

By pointing at how sensemaking in IS is sociomaterially enacted with the contribution of the materiality of digital technologies, this thesis contributes to the literature on IS sensemaking with a work that advances a theoretical contribution (Mesgari & Okoli; 2019). In fact, from the data emerges how the enactment of working practices involves the use of aesthetic knowledge, which is a form of knowledge constructed and transmitted as individuals use their body to interact and interpret the material world around them, to be able to execute work (Gagliardi; 1996). This reflects the theoretical position that Gherardi and Strati have about aesthetics, which is defined by them as "knowing in practice and knowing as corporeal doing" (2017). As this operation takes place under the affective influence of digital

technologies on working practices, this work contributes to the literature about sensemaking in IS by showing how interaction with digital technologies influences sensemaking as aesthetic and therefore embodied, as affective and agential processes contribute to shape and lead digital sociomaterial practices.

The chapter will be structured as follows:

- 2.1., I will explain how affective value emerges in sociomaterial digital working practices, as I will analyse the different parts of the conceptual framework that I reported above.
- 3.1., I will situate this work in the literature in B2B value co-creation.
- 3.2., I will explain how this work gives a contribution to the literature about sensemaking in Information Systems (IS).

I will now explain the content of the conceptual framework, by showing how the affects have emerged as circulating around the practices because of their structural characteristics, which include ethical aspects of working.

2. CONCEPTUAL FRAMEWORK

2.1. *Introduction*

By following the content of the results chapter, I will now explain the parts of the framework I exposed above. I will re-present some examples of affects I chose, and not all of them, due to the nature of this part of the thesis. At the beginning of each section, I will describe how intangibles are emerging for each posthuman condition of working, and I will mention all the affects I resonated with for every Motivation and Directedness which emerged from the data. I chose to cite a changing number of interviews for every condition, as I chose to explain this model with the use of exemplificative vignettes on the basis of their capacity to evoke the affectivity that resonated in my body during the Data Analysis stage of the research, rather than on the basis of a quantitative representation of the affects that emerged from the data. Therefore, for every posthuman condition, I will use the affective sources that I will deem capable of performing the affectivity with the highest degree of intensity, so that my non-representational writing will convey the affects with the highest degree of effectiveness. I will now start to describe the different parts of my framework.

Posthuman condition 1: Working Together.

Posthuman practice: Persuading

Motivations for Practice: Value Co-Creation, Ideas Promotion, Uncertainty (Wars, Covid, Tech Shared with Posthuman Condition 2)

Directedness of Attention: Trust Building, Forecasting

Intangible: Brand

Reflexive interview: A4, B3

Description:

When people work together, the intangible related to BRAND (the affectively significant relations that a company is capable to build, in relation to stakeholders, customers and the public) is produced as affects circulate around the practice of persuading. The practice of persuading, in fact, is central to build significant relations for the company, and according to the model, affects are present in this practice as intensities emerge around motivations and focus of attentions that are directly related to this practice, thanks to the sociomaterial agency of digital technologies. In fact, persuading is needed to execute work during uncertain times, to be able to promote value co-creation and new ideas, and to do this it is necessary for the practitioners to focus their attention on trust building and forecasting, and it is around these characteristics of persuading that affects circulate. Because of this process, BRAND is therefore produced around this practice, in the posthuman condition of working together.

In this excerpt, affects arise in this practice as they circulate around the motivation of ideas promotion as this intersects with forecasting and trust building as directedness of attention.

Traces of affects left in the interview transcript.

Motivation: Ideas Promotion.

Me: " Yeah, yeah. And I mean, I because I wanted to follow up a little bit more on this, on this aspect because again, like collaboration is everything right is in the form of knowledge management that like sustains everything. So I mean, I like what if I ask you to.. like, can you do like a, like can you explain this kind of like (working) relationships by using like a concrete example like, in a daily routine?"

…

A-4: "Is it a novel thing but also reaching out to their customer, somebody that would be a possible customer for that specific application and looking to get direct feedback from that end customer and

really looking at pain points and saying, okay, well, we try not to go directly to conversation and specific questions like, hey, if we solve this problem, is that useful for you? More of how do you go about your day? What does this look like? And we try to, say you know, kind of fuel around to say, is there a problem here is.. I mean, we think we have an idea where we can solve something for you, are you giving me input that makes me believe that there is an actual problem?"

<u>Directedness of Attention: Forecasting.</u>

Me: "Okay. Okay I see. So basically I'm interested a lot because you use this for I mean, about the fact that you use this word, sensing. I mean, so it's, it's kind of like it's intuition, basically. Like do you think?"

…

B3: "Yeah, I mean, I, uh, to some extent, yes. And I, I deliberately use that word because and so sometimes we as a company and maybe other companies, I would say we tend to be short term oriented. I think. But as a senior technologist, I need to be able almost to predict or a what sense or I guess to some extent guesstimate people say that a lot of that and what would be, what would be up, what would be the ease of what are we going to be worrying about eight years by year's end?

And I think a lot of that is, uh, really unpredictable, right? I mean, the, you know, things like recessions, pandemics and all of these things. Yes. Some things with being upcoming and we plan as this, we can at least necessitate, but some things can't speak it out, are very difficult to predict. They all um, and I, again, as part of the source of that information, I need to, I need to be able to smell, you know, that well, what is it?

What is it that we're going to have to solve for in three-five years time?

Traces of affects left in the video/audio recordings.

<u>Directedness of Attention: Trust Building.</u>

As I asked A4 to describe the working relationships he was embedded in, by contextualizing them into a daily routine, he started to explain them in a rather linear fashion. The description initially went on with a regular cadence in the tone of his voice, as I was carefully listening to what he was saying. After telling me an example related to how he would work on a specific project he was working on at that moment in a daily routine, at one point he started telling me about how he would establish a direct contact with the customers. As the interviewee started talking about this aspect, the mood of the interview started to change and entered a surge in tone. This surge was accompanied also by a change in the facial expression,

which seemed to be more focused now. If before this point it looked like the interviewee was describing a grocery list, now was immediately understandable that the topic was more of his interest. If this surge was dictated by the fact that this topic was more directly related to the question I asked initially, then the climax of this surge was reached as the description moved on to analyse the approach tactics the interviewee adopted to establish a direct relationship with the end customers for the sake of product development, and not just with the upper echelons of the company they worked for. At this point, the interviewee assumed a different tone, as if he was trying to make me understand, with the tone of the voice and the hand gesture, how this part of the job was supposed to be made by using also interpersonal, and not just professional, skills. The interviewee in fact, assumed a more friendly tone, as I was slowly nudging my head in sign of comprehension, and started talking as if he was describing a working relationship he had with a friend, rather than a client. In particular, the tone the interviewee used was more like the tone one has when talking about serious things, but in a not so serious ways, as demonstrated also by the fact that he/she used a word usually employed in informal contexts such as "hey", to describe how he/she would call the customer to establish with him a working collaboration.

Posthuman Condition 2: Working as Individual activity.

Posthuman Practice: Controlling

Motivation for Practice: Efficiency, Uncertainty (Shared with Posthuman Condition 1), Working Private/Life Balance

Directedness of Attention: Ethical Factors, Arranging Working Spaces/Times (Shared with Posthuman Condition 4), Technologies

Intangible: Flexibility

Reflexive interviews: A9, D4, D10.

Description:

In the posthuman condition of working individually, as affects circulates around the practice of controlling, the intangible created by these affects is FLEXIBILITY (the ability of a company to rapidly adjust its operations to markets change), as the practice of controlling allows an improved logistical agility and a more flexible networked production. Specifically, according to the model, affects circulate around the practice of controlling, and make it capable to produce that intangible, because this practice is needed to make sense of uncertain working conditions (in commonality with the practice of persuading) to be able to improve efficiency of the company operations at various levels (in commonality with the practice

of choosing space/times) and to achieve a functional work/life balance. To achieve this, it is necessary to perform controlling while focusing, in this practice, on ethical factors such as the respect of cultural differences, that might demand some tasks to be performed in different ways in different working settings, the use of technologies at work and different working time/spaces arrangements (shared with the practice of choosing space/times). Eventually, affects arise around these motivations and focuses of attention, allowing the practice of controlling to stay together and produce FLEXIBILITY.

Traces of affects left in the interview transcripts.

Directedness of Attention: Ethical Factors.

A9: " (speaking of cultural aspects in collective working practices) Um, it also helps to be a woman (giggles), because they are not that many women in [TechCorp], in engineering quality. So, um, women are even more helpful with each other. I mean, everyone is helpful to everyone else. But with women um, especially if you want to make a career, as a woman, um, you network with other women within [TechCorp] in relatively high positions, and then they help you advance.

Me: "So, so would you say that there is, there is a community of women. I mean."

A9: "Yeah, there was even a formal community. It's [TechCorp]: women in leadership or so? I'm not part of that, but I know women who are, um, and usually when I meet women in higher positions, they are always looking out for and always offering to introduce me to whoever else might be helpful for a question like okay.…Me: " But I mean, it's a, I only wanted to say that, I mean, in my opinion, again, like since I care about networks and how they're formed that, now, what you're saying is that like ethics play a part like that, there's an ethical part, like that ethics play a part in the formation of these networks, right?"

A9: "Yeah, absolutely."

Motivation: Uncertainty (shared with Posthuman Condition 1).

Me: "Okay? And okay. And do you do you think that these again ... It's like what do you think about it really? Like how you think it impacts your job, these technologies."

…

D4: "Yeah yeah it's really helpful. I like how connected everything is and how I can share some of it in advance with them because it's often easier to understand what I'm doing rather than you just telling them or having to download things, upload things. So that's really convenient. Um, and yeah, I think it's

also a little bit of course, uh, you have a little bit of respect for the whole process because a lot of it is automated, which is again convenient.

But at the same time also there is this more fear in you, like what if something goes wrong and I don't have control over it and it's kind of you're just putting it out there in the world. So, there's sometimes that for you, like what if something goes wrong? But that's why we try and break it down into smaller samples that even if one batch is bad, you can then correct it."

Traces of affects left in the video/audio recording.

Directedness of Attention: Arranging Working Spaces/Times (Shared With Posthuman Condition 4), Technologies.

About ten minutes after the start of the interview, I asked D10 if, in her opinion, values had a role in defining a digital working practice, and in case the answer was yes, how this happened. At this point, after briefly explaining me how values could have been considered in a digital working context, D10 mentioned on her own, that what she was talking about was how her identity related and drove digital working practices, rather than values. As this mention was made, D10 immediately changed her tone of voice, and a light smirk of complacency showed up on her face, as she affirmed how the use of technology made her happy, because technology allowed her to be able to fully control her working arrangements because it was helping her to take advantage of peculiar traits of her personal cognitive sphere. A sense of ease pervaded the conversation as this affirmation was made, the mood of environment changed, as the concentration D10 was using to answer my questions shifted into a more relaxed tone, a tone that somebody uses when recalls good memories, related to good feelings felt both in the past and the present, as if she was talking of the help gave to her by a good friend. Furthermore, D10 mentioned also how the use LinkedIn (a social network for professionals), helped her to better take care of her professional image, by making a practical example of how this happens. Then, she concluded by saying that she was very happy with having Google knowing everything about her, because of the help it provided. This affirmation came as she started slowly to make her smile bigger, to touch her hair as kids do when they are excited and feeling vulnerable at the same time, because they are talking about something personal, and to speak a little bit faster out of excitement, and then she concluded the sentence with a big smile. I felt the same sense of excitement and I was pleased that technology was useful for somebody who experiences psychological problems, so I smiled back at her.

Posthuman Condition 3: Working as Activity of Knowledge Creation.

Practice: Searching

Motivations for Practice: Value Creation, Producing Effective Knowledge

Directedness of Attention: Networking, Problem Identification, Uncertainty

Intangible: Knowledge

Reflexive Interviews: A5, A7, D3.

Description:

When the participants work to create knowledge, affects are present around the practice of searching, thus allowing the intangible related to KNOWLEDGE (the codified or tacit knowledge at a firm's disposal) to emerge, as this practice is fundamentally intertwined with knowledge creation. In particular, according to the model, affects are present around this practice as they are linked with motivations for that practice such as creating value and effective knowledge (which is company knowledge characterised by a high degree of operationality for the activities of the company), while the focus of attention, around which also affects emerge, falls on the activities typical of searching: networking, problem identification and navigating uncertainty. Thus, as affects circulate around this practice, linked to those motivations and focus of attention, they allow searching to happen, and company knowledge to be produced, thus permitting KNOWLEDGE as intangible to be created.

Traces of affects left in the interviews transcripts.

Directedness of Attention: Problem Identification.

Me: "And the.. How do you like.. again, in more specific ways? May I mean, like or again, would you like to expand on this? Like how do you think this changes the (teaching) process you've just described?

D3: "I mean, in the past.. at least I had to experience in my undergraduate studies was where you went to the lecture and lecture one, you went to the seminar corresponding to that lecture you went to lecture two, and that was pretty much it. You had a script, you followed it, and that was it. Now it's no longer so much learning about the facts, so you're not really learning how to memorize things, but you're learning how to apply things and how to search and find things.

And that is changing pretty much how students learn because now we can use some of the elements to say, okay, look, go out, find information on a particular company, for example. And then as we go along through the semester, think about how it applies to that company. This is not something you're going to find an answer to because companies don't think in terms of some of the theories they might implicitly

find. But how can you make sense of what the company is doing? And think about the theory that we have discussed? And of course, yeah, then having a Q&A session or having a quiz to kind of provide a bit of guidance along the way is something where we then deepen the learning a little bit and foster more engagement. Of course, whether students engage with that, that's a different question because I think one of the challenges we see not just in academia is that there's a lot of distraction. So, if online and we're really going to look at what I'm supposed to look at, what am I going to go to YouTube for or Amazon Prime or Netflix?

And so, I think there's competition for attention, that is happening as well. And so, to some extent, you kind of like to know how machines are changing us, too, as well as we have to think about, okay, what are the students like? Can we really put on a one-hour lecture recording if they're used to two-minute video clips on YouTube or TikTok or Instagram with the latest technology, as I have, I'm using another time, really."

Directedness of Attention: Networking.

Me: "What's, what's like, what's important, What it's like. I would like to understand how like; this communication can happen in practice on a daily routine. Like, I don't know, literally like this, I open the computer, I send them an email, you know, this kind of stuff… Oh, like super."

A7: "Okay, So just to give you give you a more general, but also the first is in being the position where you want when you want to have the conversation with an expert.

That's the first positive when you've identified a problem in the situation, when you're in a situation when you need a verification with an expert you need to hear the opinion of an expert in a specific dispute. So, the first is to identify the right expert to talk to, what first… Exactly. In and what the relevant question that you answer to identify it as much as you want you want to talk to and find a medium, of always to establish a contact with this expert and get to limiting and then and, and explain what you are working on.

It is a little bit about what you were working on and then on, on the topic you need insight on then subsequently. And that way when you don't hold your contribution control, then you ask them to quiz them and then get their feedback. So, I think does justice to description of it. I mean, and I you this so far anyway."

Traces of affects left in my own memory.

<u>Motivation for Practice: Producing Effective Knowledge</u>.

A5 accepted to do the interview outside of his working hours. As a matter of fact, we were having a video-call as he was getting ready for the start of his working day: he was at home as we were talking, and the house was immersed in the environment of a typical family that is, together, preparing for the respective daily duties of its members. The environment was therefore relaxed, but there was also the feeling of slight tension that came from the fact that everyone was a bit rushing, a feeling that one can sense as a working day is about to start. In that situation, it was possible to hear in the background all the noises that characterise such an affective atmosphere. He was talking with me via the Ipad provided to him by his company, while he was walking around the house. I had been advised, at the start of the interview, that he might have to continue it from the car, as he could have been in need of leaving the house at any time; therefore I was also careful in making him not lose any time, and so I was also part of this familiar affective atmosphere generated by this daily routine, I could feel it. At some point, while I was talking, the attention of A5 got attracted by something happening in the house: I heard the voice of a small kid talking from afar, and even though I could not hear what the kid said, A5 immediately reacted to that, and turned his head in the direction of the voice and said something I could not hear. That unexpected encounter though changed the course of the interview: as evidently the kid wanted him to do something for which they had to leave the house, A5 took that occasion to tell me how technology was, sometimes, impeding him to do something. In fact, A5 was trying to transfer the videocall from the company Ipad to his personal phone, to keep talking to me in the car, and he was not managing in doing so because of the limitations that the company puts on usage of its proprietary softwares. So, A5 took this occasion to mention how, also outside of that situation, limitations of any kind related to technology were detrimental not just for our interview, but for work in general. As he was making such a statement, the tone of his voice changed slightly, as he was annoyed, but in a comprehensive way, at what was happening: to show solidarity and comprehension, I started laughing too, and this affective exchange allowed us to take the mood of the interview to a new direction.

> ### *Posthuman Condition 4: Working as Situated Activity.*
> Practice: Choosing Space – Time
> Motivations for the Practice: Efficiency (Shared with Posthuman Condition 2), Atmospheres
> Directedness of Attention: Flexibility of Working Spaces (Shared with Posthuman Condition 4), Time Rhythms
> *Intangible: Knowledge*

Reflexive interviews: D10, B1.

Description:

In the context of the posthuman condition of working as a situated activity, the intangible of KNOWLEDGE is produced as affects circulate around the practice of choosing (working) spaces/times. This intangible is produced because by choosing the right times and places, working becomes more productive and therefore more KNOWLEDGE can emerge. According to the model, affects circulate around the motivation of choosing space/times to improve efficiency (shared with the practice of controlling) and create the right atmosphere were to work, as the focus of attention falls into considering different time rhythms and the flexibility of working places (also shared with the practice of controlling). Affects circulating around these motivations and focuses of attention thus allows the practice of choosing space/times to stay together, permitting the intangible of KNOWLEDGE to emerge.

Traces of affects left in the interviews transcripts.

Motivations for the Practice: Efficiency. (related to Posthuman Condition 2)

Me: "Okay. I would you say that.. I mean, that technology also.. now I was thinking I was thinking because now you, you mentioned the like, the spaces. Right. Does technology change your, your perception of the spaces where your work, do you think? I mean, it makes like you know, it makes working at home different than working like in person? There's the relationship between technology and space. I mean, like, you know, in that in a context like ours where apparently some employees feel like their employees don't want to work in-person at their workplace anymore. So, like, you know.

D10: "I'm, I like I both I like, like being on campus. because it's I think is in Durham is a good place to work. I enjoy for instance to have my colleagues, so I enjoy every time I go there, but I don't, I don't live locally, right. it's 70 miles away and I might eventually at the moment, relocate and move to Durham.

But for now, yeah, I don't need to go there to do the things that I can do from here, but I, if I'm going to be writing all day, I don't need distractions I'd rather stay at home and do my writing. and I won't even travel. But there are other things out there. I would rather be there than doing it online."

Another excerpt. Directedness of Attention: Time Rhythms.

Me: "I know. I mean, like, I am loving this.. like, This is perfect.. perfect! Eheheh!, it's I mean, like, so what you're saying is that like in practice sometimes, like, maybe these machines can be horrible. I mean,

because like because they don't I mean, because there are like established practice working practices that.."

B1: "I think when now, like I said, genuinely, you know, there's something very, very efficient about, you know, next week I'm going to go to Brussels. Last week I was in Reading. I can still run back to back. Right. I need to talk to Marco then.

I need to talk to Andrew then. I need to talk to Sarah, I can say. Right, Marco 11, until 12, 12:00 I'm quickly going at some lunch, 1215 I talked to Andrew and then 1:00 I talked to Sarah and I said it all up on teams, but we've reached talk and I can go, bang and stop. I don't have to walk down the corridor."

Traces of affects left in the video/audio recordings.

Directedness of Attention: Flexibility of Working Spaces.

I was talking with D10 about how he found having hybrid online/in person meetings at work. As he was answering, the tone of the interview changed as he stated how difficult it was for him to follow and eventually lead meetings that happened on two different communication spaces. Feeling that the topic of where one worked was of interest to D10, considering the reactions he had about my previous question about hybrid meetings, I decided to ask D10 if technology was making working from home or working from the office different, and in case, in which ways. The conversation had, until that point, a personal tone, it was not like D10 was talking to a friend, but still, intimate. That feeling was reflected also in their body language, as he was talking to me online by keeping one of his arms over the back of the chair. After I asked that question, D10 told me that he had no preferences between working from home or at the office, yet when he stated how far he lived from the workplace and how that prevented him to commute easily to work from the office, the tone of the interview had a gasp for a moment. What I felt at that moment, as the tone of the interview steered even more towards the establishment of an intimate relationship between me and D10, was that working spaces were important for D10, as they could affect his capacity to focus, among the other things. As he immediately assumed a more pensive tone, which stated clearly how important for him this aspect of working was, in fact, D10 also made some examples that explicitly stated how working spaces could affect his capacity to focus, and in particular working from home. As he was stating this, the conversation assumed a more pensive tone, to which I adjusted.

Traces of affects left in my own memory.

Directedness of Attention: Time Rhythms.

I remember that the whole interview I had with B1 was characterized by two things: a very high rhythm of the conversation, and by the fact that at some point, he started referring to me and to himself by using our respective names, so he was referring to himself by using the third person. Even though the two things are related, in my opinion, for reasons I will not further investigate here, I would like to focus on the rhythm of our conversation. It was clear that B1 was using that rhythm because it reflected the way in which he worked: fast paced. In fact, he put a lot of emphasis on working rhythms and collaboration with colleagues in our interview, and even though this was also influenced by his working position, it was impossible not to notice how important that aspect of working was for him. B1 had a high rhythm in all the parts of the conversation: in the tone, in the use of words, in how the hands to convey meaning. In particular, his use of words surprised me, because it was like he was basically singing a rap song. At some point, as we were talking about how technology was changing the ways in which he collaborated with people in his team, a mention to the importance of working together was made. At that point, B1 started describing how much easier was to meet people in person at the office and how this improved the rhythm of his work. As B1 was describing this, he started using sentence constructions and specific words, to make sure that I understood exactly what he was meaning, as if by using a determined wording construct and a certain tone, he would have been able to make the message stronger. In particular, it impressed me how he used the word bang! To describe how a meeting could happen at any time at the working place, and how that was useful. That stayed on me, because it is not usual for an interviewee to use such an onomatopoeic word to describe something, in working environments that are usually more relaxed. All that energy stayed with me, and it still resonates in my body now.

I will now expand on the contributions that this research brings to the aforementioned literatures.

3. CONTRIBUTIONS

3.1. *A novel posthuman practice-based theory and research methodology for B2B value co-creation.*

3.1.1. Introduction. *An empirical practice-based studies of value co-creation in digital technologies.*

As the economy is becoming digital and networked, discussions around the concept of value co-creation are increasingly taking place in the literature, with the emergence of perspectives such as codesign, codevelopment of value propositions, colearning and coinnovation, with the prefix "co" that indicates the shared work among the various actors involved in the value ecosystem (Avila-Garzon & Bacca-Acosta; 2024, Kohtamäki & Rajala; 2016). To give an accurate definition of what the concept of value co-creation entails, it is necessary to depart from the origins of this idea, so that it will be possible to

understand how this study contributes to its literature as it gives a contribute to the literature on practice-based studies.

The concept of value co-creation stems from the Service – Dominant Logic (SDL) on value creation in marketing studies, a theoretical position on value creation that surpasses the previous Good – Dominant Logic (GDL) which sees value as created by companies and destroyed by consumers as part of a transactions based on goods exchange, with the two actors clearly distinct also in the definitions of exchange and use value they benefit from. SDL instead posits that value is created by the provision of services that are mutually exchanged by the parts, and that services are not just another good, but the main focus of the exchange. According to this perspective, there is no separation between companies as producers and customers as consumers of value, but instead "all parties (e.g. businesses, individual customers, households, etc.) engaged in economic exchange are similarly, resource-integrating, service-providing enterprises that have the common purpose of value (co)creation" (Vargo & Lusch; 2011). There are multiple concepts, or premises, that underpin SDL. Vargo & Lusch (2008) identify ten of them, the analysis of which is beyond the objectives of this paragraph. Among them, there are two that interest this research project: value creation is interactional; therefore it is co-created in a determined service ecosystem that includes customers, company and other service providers, and that value is phenomenologically, therefore subjectively, determined by the beneficiary (Vargo & Lusch; 2008). The creation of value, as it is conceptualised by the SDL logic, is therefore socially constructed, subjective, and relational: aspects that, as it will be seen, are relevant given the aims of the contribution to the literature advanced by this work.

To give a definition of what value co-creation is in SDL is not easy, as there is a plethora of different interpretations of this concept. Yet, to give a broad definition of value co-creation that is relevant for the ends of this project, and to make the definition clearer, so that it will be possible to analyse how this study contributes to value co-creation in B2B contexts, this can be defined in accordance with the akin concept of coproduction of value proposition. This last activity is executed by the participants as activity of value co-creation, and by comparing the two definitions, it will be possible to give further details to the concept of value co-creation. In any case, it is important to note how also in the SDL framework, the co-production of value propositions is framed as a sub-process of value co-creation. Therefore, according to the SDL it is possible to define these two concepts as such:

- The co-creation of value is the outcome realised through the interaction happened in the value ecosystem;

- The coproduction of value proposition is the shared design and development of the value proposition as an outcome that can be exchanged among the participants in the value ecosystem.

(Kohtamäki & Rajala; 2016)

After introducing the concept of value co-creation and its framing as premises within the SDL framework, is it possible to describe how this work contributes to the literature of B2B value co-creation and practices studies.

The two premises of SDL on value co-creation – value is created in the interaction, and it is phenomenologically defined as benefit of the recipient - are important because this research project provides a contribute to both, as it gives to the literature in B2B value co-creation both a theoretical and a methodological contribution. In fact, as this research project provides the first empirical example of a study on value co-creation in the B2B context based on a practice-based study, which was absent so far from the literature (Kohtamäki & Rajala; 2016, Saha et al.; 2022), and by contributing to the literature on value co-creation in B2B contexts by bringing in it a novel conceptualization of value as affects, as the previous literature on co-creation conceived value as the "benefits subtracted from the sacrifices associated with the B2B exchange, subjected to the supplier when conducting the transaction" (Vargo et al.; 2008), that resembles an utilitarian perspective, the approach to posthuman practices that I employed to study the emergence of affective value advances two fundamental contributions for the field of B2B value co-creation in practice based studies:

- A theory of how value as affects is created in the intra/activity realised in practices as diffractive agential cuts, which contributes to the ontological debate about value co-creation (Vargo & Lusch; 2011);
- A methodological tool based on a post-phenomenological ethico-onto-epistemology of practices, that makes possible to understand how value is co-created for the beneficiary with the establishment of a determined affective assemblage that involves both human (i.e. developers, customers) and nonhuman (i.e. communication and manufacturing technologies) actors.

After this brief introduction, I will now proceed in exposing the theories and methodologies present in the B2B value co-creation literature, and in explaining how this research project contributes to those two fields.

3.1.2. Contributions to theory of value co-creation in B2B settings.

By building on the latest developments of practices as epistemologies in MOS, this work gives a theoretical contribution to the literature about value co-creation in B2B settings, by introducing a theory

of B2B value co-creation based on posthuman practices. To frame this contribution within the literature on theories about value co-creation in B2B settings, it must be said that in the literature about value co-creation and coproduction of value propositions is rich and varied, and that SDL regroups all these theories and provides a lexicon that is a paradigm for the academic discussion on the topic (Vargo & Lusch; 2006). In the more specific field of the B2B co-creation literature nevertheless, there are also several, and listing all of them is beyond the objectives of this study. To make some examples, the IMP (Industrial Marketing and Purchasing) Group and its activities are linked to the tenets of the SDL (Vargo & Lusch; 2008), even though it differs from a strict SDL sensibility because it focuses on the relationship between suppliers and customers, rather than on the co-creation of the experience for customers (Kohtamäki & Rajala; 2016). This framework has been employed by Rusanen, Halinen and Jaakkola (2014) to study how the network linkages could provide access to resources when co-creating innovation. To make more examples, to analyse relationships in coproduction contexts, some authors have employed a Transaction Costs Analysis (TCA) and relational governance perspective, such as in the works of Athaide & Zhang (2011), which used the transaction approach to hint at how seller-buyer interactions in terms of close collaboration could increase customer satisfaction; while Kohtamäki, Partanen, Parida et al. (2013) illustrated the role of trust in the construction of value propositions.

The theoretical approach to B2B value co-creation and co-production of value propositions based on practice studies, instead of focusing on physical resources or social networks, as the previous approaches do, postulates that the unit of reference that should be considered when analysing value co-creation are practices, therefore, that what should be studied are the practices employed by service providers to collaborate (Lombardo & Cabiddu; 2017; Saha et al.; 2022). A practice can be defined as "a means of doing in which organizing is constituted, rather than static concepts or objects to be employed" (Jarzabkowski & Spee; 2009 pg. 82, Whittington; 2006), and a theoretical perspective based on practices is at the same time individual and social, as it focuses neither on the individuals or their social relations, but on their practices, therefore highlighting how the individual or their social positionings or relations acquire importance for the development of that practice (Kohtamäki & Rajala; 2016). In the context of B2B value co-creation, practices can be defined as a "socially accomplished ways of collaborating so that value is cocreated and coproduced by agents" (Chia & MacKay; 2007). Therefore, a practice of co-creation is inherently social, carries tacit knowledge that could not be transmitted differently than in a practice, and can realise itself as a routine, a tool or a concept (Jarzabkowski & Whittington; 2008, Vaara & Whittington; 2012), which once established at institutional level, that can allow colleagues to collaborate properly in value co-creation and co-production of value propositions.

As noted, the main contribution this research project brings to the theories of value co-creation in B2B is that it provides an empirical example of a posthuman practice approach to practices in this field, which brings a theoretical foundation that explains how value is co-created through a co-production of value propositions between various academic and industrial contexts, as sociomaterial affects contribute to maintain the social networks that are necessary to co-create those propositions, and therefore value. This work therefore contributes to link the SDL of value co-creation to an ANT inspired, posthuman ontology based on the sociomateriality of affects, diffraction and performativity, with its methodological implications that will be analysed in the next paragraph. In fact, so far, the literature on value co-creation in B2B context was missing such a contribution, even though the social constructionist stance of SDL, and its analysis of business ecosystems aside from dyadic relationships between customers and suppliers (Vargo & Lusch; 2016), points to a clear connection between ANT and SDL, with the potential for the development of an ANT based theory of value co-creation in B2B contexts modelled around the tenets of SDL.

With its stance on posthuman practices, this work introduces an ANT inspired theory of practices of value co-creation in B2B contexts, as it introduces an empirical study that tracks the emergence of value as affects in the sociomaterial agency of digital technologies on working practices, thus also bringing this notion of value in the literature. In fact, as ANT emphasises the role of the actors involved in a determined assemblage, in the context of a flat ontology (that is nevertheless surpassed by the ethico-onto-epistemological approach of this work, as it will be seen), SDL instead stresses "the multi-actor and multi-level systems in which actors are engaged in complex relationships", thus "As SDL sees the multiple levels although emphasizing the role of actor, SDL encourages analytical precision in regard to the role of levels" (Kohtamäki & Rajala; 2016), thus emphasizing more the role of the interactions between separate levels and actors, rather than the role of human and nonhuman actors, equally considered, in value co-creation. An ANT sensibility suggests with its orientation, in fact, to consider the role of actors as central in the development of an activity (in this case, value co-creation). An example of this stance is found in the work of Storbacka and Nenonen (2011) where they illustrate how economic actors co-create markets and strategic logics.

Moreover, it must be noted how this work introduces an ANT inspired theory of B2B value co-creation, by surpassing the theoretical limitations of ANT itself. In fact, as an ANT ontology is considered "flat", a concept that points at how every human and nonhuman actant in the ANT assemblage accounts for the same agential power, the ethico-onto-epistemological stance of this work advances instead the idea that the agential capability of the actors involved in the assemblage of a practice should be considered as

agencement, which can change according to affective intensities related to it, and that these intensities are influenced also by ethics, thus realising a critical theory of how subjectivities are formed (Braidotti; 2019). Therefore, this work also proposes a critical theory of value co-creation, as it assumes that power relations based on factors such as gender and ethnicities also lead practices of value co-creation and co-production of value propositions. It must be pointed now though, how this ontology has influence on the methodological innovations in value co-creation research methodologies, that will be now addressed.

3.1.3. Contributions to research methodologies of value co-creation in B2B settings.

As this work brings a theoretical contribution, it also brings a methodological one, and these two contributions are intertwined. A posthuman practice approach advances a post-epistemology that blurs the boundaries between ontology, epistemology and ethics, as it deconstructs the role of the researcher as an external observer, to make it instead an active agent in the production of the scope of the research, according to the agential realist stance of posthuman practices based on agential cuts, diffraction and performativity (Barad; 2007, Gherardi; 2019). Therefore, this research projects contributes to the methodological literature on B2B value co-creation and co-production of value propositions by advancing a performative methodology based on the re-production of affects considered as "the general mood of a practice" (Gherardi; 2016, Reckwitz; 2016) in the context of B2B value co-creation practices, in the reflexivity of semi-structured interviews as research methods.

This is an important contribution for the field, as the literature on value co-creation (which includes the literature on B2B value co-creation and co-production of value propositions) is still largely reliant on realist ontologies and positivist epistemologies (Kohtamäki & Rajala; 2016), from which stems a large use of quantitative and qualitative methodologies that could be better suited to enquire the emergence of co-created value as a subjective experience (Kohtamäki & Rajala; 2016). By studying B2B value co-creation practices as sociomaterial and affective, a posthuman practice approach proposes a post-qualitative and relational methodology that, by eschewing the limitations of traditional practice-based studies focused on practices as cognitively defined activities executed by independent human actors, wants to study "how" the nonhuman and human elements come together in a determined practice, including the researcher, and gain agency as the power to mutually define each other in that practice. This methodological approach centres on embodiment, as it assumes the non-separation between matter and discourse, the social and the natural, and makes it reverberate in a performative and reflexive narration that diffracts the affects under study, re-presenting them to the reader. By doing so, the methodology becomes focused around a diffractive reading/writing of the affects in a practice. Thus, the post-epistemology of practices this research project proposes, introduces a new methodological unit of analysis, namely the practices

themselves, instead of introducing a methodology geared around a discourse or content analysis. In any case, there is only one study in the B2B value co-creation literature that uses discourse analysis as methodological tool: Rod, Lindsay and Ellis (2014) used it to uncover how managers in India and China make sense of the notions of "value" and "value co-creation".

3.2. A performative ethico-onto-epistemology for organizational-technological sensemaking. Embodiment in IS sensemaking.

3.2.1. Introduction. A novel "new materialist" perspective in organizational/technological sensemaking.

It is possible to understand information technologies in various ways, as they are defined as "equivocal" (Weick; 1990). This means that, because of their multitasking role, they can be seen differently by different actors involved in their use, and this can have direct consequences on the individuals and the organizations (DeSanctis & Poole; 1994, Mishra & Agarwal; 2009). Hsiao et al. (2008) explain this phenomenon by showing how different understandings of the role of the GPS made by taxi drivers in Shanghai could result in changes in the customer's base of the taxi company: for instance, if a taxi driver understood the GPS dispatching unit as a "detector" of customers who had requested a taxi, the customer experience and quality of the ride would improve, because the driver could drive better and for a shorter time, as it knew the customer and its preferences in advance; on the other hand, drivers who understood the GPS as an "explorer" of new routes, could enlarge the number of customers they could serve, because of the new routes they discovered as a consequence of the particular use they did of the GPS. For this reason, it is important to understand how human actors make sense of technology. In organizational studies, this activity has the name of "sensemaking".

To be able to frame my contribution to this field, I need to explain what the relationship between the organizational and technological sensemaking literatures is. To expose this shortly, it should be affirmed how sensemaking is a social operation in nature, therefore it is something that cannot be analysed separately from its organizational and social aspects. Consequently, if the literature on technology (or IS) sensemaking focuses more on how technologies enact sensemaking, the organizational literature on sensemaking focuses on how social aspects like power, culture, structure and norms play a role in defining the sensemaking of organizational phenomena that include also technologies. In conclusion, these two literatures are intertwined, and the literature on technology sensemaking can also be considered as included in the organizational sensemaking literature (Mesgari & Okoli; 2019). Consequently, the ontological and epistemological positions used in the organizational literature are relevant also for the

field of technological sensemaking; therefore, for the ends of this section of my thesis, it is necessary to include these onto-epistemological positions in this section, so that I will be able to frame more precisely my contributions to the field of sociomateriality in IS, as I make my academic intervention into the literatures under examination here.

In the organizational/technological sensemaking literature, sensemaking is defined as "the process of attributing appropriate meaning to new experiences" (Louis; 1980, Weick; 1995) of organizational and technological phenomena, and it has two dimensions: one related to how individuals actually make sense of a phenomena, and the other related to how other individuals convey sense about something, which is known as sensegiving. These two dimensions are related, because the processes of interpretation and sharing of meaning are dependent on the same onto-epistemologies of knowledge. Furthermore, both dimensions can be studied from the perspective of both individual and collective actors (Mesgari & Okoli; 2019).

Specifically, the research in the field focuses on the study of two phenomena related to sensemaking:

- How individuals and collectives cognitively create mental frameworks that allows them to generate models and representations capable to allocate meaning to the experience related to organizational and technological phenomena;
- How the social context influences how users make sense of technologies.
 (Mesgari & Okoli; 2019).

By building on this situation, two main theoretical approaches to sensemaking affirmed themselves in the literature: the first is cognitivist and studies how sensemaking is made in the mind, and the second one is the discursive approach that follows a constructivist-discursive orientation, which studies how sensemaking is primarily made in language and interpretations (Sandberg & Tsoukas; 2015, 2020). It is important to make this differentiation, because as it will be seen ahead, the multiple contribution that this research project brings to the literature about IS sensemaking departs from a main contribution to the discussion on the theoretical foundations of sensemaking.

In this regard, authors such as Enang et al., (2023); Sandberg & Tsoukas (2015, 2020); Jensen & Mahmud (2023) identify a problem in the fact that the organizational sensemaking literature focuses mainly on these two theoretical approaches and argue for the inclusion of different theoretical perspectives in it. For instance, Sandbergh and Tsoukas (2015), affirm that "the mainstream cognitivist origins of SP [sensemaking perspective] prevented it from taking the body more seriously, and called for paying closer attention to embodied sensemaking by drawing on phenomenologically oriented enactive cognitive

science", therefore calling for the adoption of approaches to sensemaking which contemplates also the affective, embodied and affective dimensions of sensemaking.

By drawing on such suggestion, I affirm how my work provides the case for such an addition, as it puts forward the case for a study that uses a Baradian methodology of diffraction, to explain how affective agency of digital technologies is acquired through agential intra/relations that are productive of relational knowledge in practice as "knowing in practice", which is ultimately a form of embodied sensemaking. Therefore, by drawing on the new materialist philosophy on which this agential realist methodology is based, I can now affirm how this research project contributes to the IS literature on sensemaking (which, as said, includes both contributions from the technological and organizational literatures on sensemaking), by showing how the affective agency of digital technologies enacts a form of embodied, performative and situated sensemaking on organizational phenomena such as power and structures, and therefore also on technology itself, as these social features contribute to shape the meaning that humans attach to technology, and as technological features contribute to shape how humans subjectivise technology and the social aspects of organizational life.

As it will be further investigated, the contribution will mainly focus on the three shortcomings of the existing literature on IS sensemaking:

- Lack of technology materiality;
- Neglect of the discovery aspect of perception;
- Lack of action orientation;

As the diffractive methodology coupled with the posthuman practice approach utilised by this work makes possible for me to make an intervention in all three discussions. Yet, before starting with those examinations, it is appropriate to establish exactly in what my theoretical contribution consists of, and in how it situates itself in the theoretical debate present in the literature.

3.2.2. A critical analysis of the current organizational/technological literature.

To better understand how my contribution situates itself in the literature, I will now review some of the works that bring a different ontological approach in the field, so that I will be able to execute such task with a higher level of accuracy. As a matter of fact, in the literature it is possible to find works that offer ontological perspectives on sensemaking that considers its embodied, affective or situated dimensions, but these are mainly informed by phenomenology (Dall'Alba & Sandbergh; 2021). This work, as it will be seen, proposes instead an embodied view of sensemaking based on an onto-epistemological criticism of the role of the researcher in the research process.

To cite some works in this regard, the work of Cunliffe & Coupland (2012) focuses on how embodiment is a fundamental part of making sense of the context actors find themselves in, as they make their experience "sensible" in embodied interpretations, within contested "narrative performances", in the same way, Yakhlef & Essén (2013), consider the body, and not the mind, as executor of determined practices that allow innovation, as this emerges in our bodily skilful coping mode, which is at the same time expressive and responsive. Also De Rond et al. (2019), while investigated how, in the first attempt to scull the Amazon river, focused on the role of the body in sensemaking from two points "of the body" and "from the body", which allows them to get to a new way to "see the body" as sentient, situated and capable of suffering, a novel theoretical perspective of embodiment in organizational sensemaking. The aforementioned work of Jensen & Mahmud (2023) specifically criticises the ontological "split" identified by Sandbergh & Tsoukas (2020) that exists, in their opinion, between the human actors and the external reality they study. They instead put forward a vision that sees sensemaking as happening in a space were human and nonhuman elements are symmetrical, and they constitute reality together, by taking inspiration also on the works of Mol (2002) and Introna (2019). Consequently, they criticised human-centred notions of sensemaking and advance an ontological position similar to the one proposed here. Yet, my contribution, with its new materialist philosophy of diffraction that acknowledges how the production of knowledge is a matter of intra/relating affective agencies, which puts neither humans nor nonhumans actors as principal knowledge producers, proposes here a vision of embodied sensemaking which escapes the ontological limitations of phenomenological visions of embodiment towards epistemological performativity and nonhuman agency, and further criticises the discursive and cognitivist perspectives of sensemaking that position humans as sole producers of knowledge. In fact, as this works enquires on the affective agency of digital technologies in the production of affective value and it tracks its emergence, it also affirms how the sociomaterial, affective agency of digital technologies plays a role in the formation of sensemaking (thus, knowledge) as an embodied and situated activity. This contribution therefore hints at the active role of digital technologies in sensemaking, and it brings a novel perspective of sensemaking in IS sensemaking studies, by providing an answer to the literature gaps identified by Mesgari & Okoli (2019).

3.2.3. Embodiment and diffraction: a new-materialist sensemaking knowledge in IS.

To explain how the concepts of diffraction and embodiment are related to each other, and therefore why to introduce a theoretical innovation about embodiment in IS sensemaking studies means also to introduce a methodological innovation about diffraction in the same field, it is necessary to expose how a diffractive methodology allows not to represent, but to re-present (Barad; 2007) affective and bodily

states in IS sensemaking practices, so that it will be possible to understand how sensemaking, and therefore knowledge production, ultimately relies on embodiment to take place.

As aforementioned, a new materialist philosophy assumes the entanglement between the natural and the cultural, the social and the material in a process of continuous refinement between these two worlds, as they mutually exert agency as the "capacity to affect and be affected" on each other. This mutual agency is not dependent on human will; as the material world is not capable to reproduce it, yet it is dependent on an embodied capacity to affect, which is constituted in the interaction between the body/mind of the researcher and the material world. Then, an epistemological turn occurs, as humans gets displaced in their role of sole producers of knowledge, and epistemologies such as constructivism or positivism based on the role of the human mind to represent or interpret the social world lose importance. In this situation, knowledge is not a cognitive product; yet it is a relational, embedded and embodied practice in constant flux: in the context of a new materialist philosophy, knowledge is therefore embodied, and practical, as it is defined in the interaction between human and nonhuman world, and in the case of this research project, in the interaction between workers and digital technologies.

Consequently, studying IS sensemaking as embodiment entail considering sensemaking as a relational and sociomaterial practice, and a diffractive methodology allows precisely to study these embodied practices, as it builds on a new materialist onto-epistemology. As a diffractive methodology problematises the role of the researcher as external examinator of an independent reality, it allows not to represent but to re-present, as "to produce again" the embodied and embedded capacity to affect of digital technologies in practices of knowledge production, thus sensemaking, in the body/mind of the researchers and consequently, in the body/minds of the readers of the outcome of the project. This is the methodology assumed by this research project, as this also considers knowledge as always embodied, situated and performatively re-produced in the affective sociomateriality of digital working practices.

A diffractive methodology is therefore capable to "diffract" as a performative way to produce knowledge as embodied, as it attends to the patterns of differences that allow some elements to matter and some other elements to be excluded from a sensemaking practice, both humans and nonhumans, as these elements exert an affective agency on our bodies as researchers. Diffraction thus allows to understand how digital technologies enacts form of embodied sensemaking, through the problematization of what Sandbergh & Tsoukas (2020) call first and second order sensemaking practices in organizational studies: by focusing the attention on how the researcher and its research practices (i.e. the secondary world) affectively interacts with the sensemaking practices of the practitioners under study (i. e. the primary work) in the data analysis stage of the research, considered as an ongoing endeavour that goes together

with data collection, it is possible to diffractively re-produce embodiment on the body of the researcher and the reader, and therefore to understand how sensemaking is produced as an embodied ongoing sensemaking practice.

After this introduction about the reasons for which the ontological concept of embodiment, and its related epistemology reliant on a diffraction, constitutes a novelty for the field of IS sensemaking studies, I am now able to explain in detail how this research project contributes to the three gaps in the literature identified by Mesgari & Okoli (2019) lack of technology materiality; neglect of the discovery aspect of perception; lack of action orientation. In any case, it is advisable to introduce the field with more detail before discussing the contributions.

3.2.4. What is IS sensemaking?.

As stated before, technological sensemaking can be considered a subset of organizational sensemaking, as it focuses on the sensemaking of technologies in organizations (Davidson; 2006, Weick; 1990). This is because technological sensemaking is social, as any other forms of sensemaking, so it cannot be examined without considering its social/organizational context. In this framework, technological sensemaking is a subgroup which possess its own literature, the analysis of which eschews the objectives of this paragraph, as the contribution that this research project puts forward is ontological and epistemological, which are theoretical aspects that the organizational and technological sensemaking fields share. Thus, the main aspects of the theoretical contribution that this work brings to the literature have been already examined.

Information Systems sensemaking (or technology) is a field of studies which investigates how individuals or groups of people come to understand and frame new technologies and eventually make it meaningful in a specific way (Gephart; 2004). As it has been analysed, this research project assumes this process to be relational and sociomaterial, therefore technologies influence affectively how human subjects frame the same technologies, as technologies influence how humans see other organizational phenomena. As seen before, the current literature on IS sensemaking is founded on the same ontological and epistemological positions as the larger organizational sensemaking literature, and it focuses on same phenomena related to organizational sensemaking. These phenomena are:

- cognitive processes of individual and collective understandings about technology;
- how social aspects influence how actors understand technologies (Gephart; 2004);
- the sensegiving activities used by mediators to convey to the practitioners sense about what a technology is, and how it should be used (Okamura et al.; 1995).

(Mesgari & Okoli; 2019)

Among these, especially the literature on cognitive processes of technological sensemaking is quite ramified. This literature, in fact, includes subsections about IT domain categories – or individual mental models which can be used to represent things such as technological features or the introduction of IT in working practices –, framing processes – which focuses on the process of creating a mental model rather than on the model itself – (Davidson; 2006), triggers of technological cognitive sensemaking (Griffith; 1999), patterns of technological sensemaking – which are three: pessimistic symbolism, romantic, pragmatic- (Prasad; 1993). The literature about how the social contexts influence aspects of technological sensemaking is smaller, but it includes some interesting examples, nonetheless. For instance, Siino & Hinds (2005) study how gender roles influence how actors cognitively understand the presence of robots in hospitals; in the same healthcare context, Karsten & Laine (2007) show how interactions between different groups of users fosters a similarity in the meaning these groups make about technologies. Social and professional roles equally have a role in how technology is understood (Siino & Hinds; 2005); for instance, Vaast (2007) detects how different groups of workers, with different occupations, develop different understandings of information security systems in different ways, and attach to it representations that depends on their work contexts.

Ultimately, the literature on sensegiving about technologies (or sensegiving by technology-use mediators) focuses on the practices practitioners enact to influence user's sensemaking, and they can focus either on changing the technology or the perceptions the users have of the technology, to make sure that the value of the technology is understood and captured (Gäre & Melin; 2013). Examples in this literature include: the work of Bansler & Havn (2006), which shows how sensegiving practices oriented at users focus on communicating the system and explaining its use, sensegiving practices aimed at technologies focus instead on making the system easy to use for the users, and also on making it communicate easily its functions to them; the work of McDaniel Albritton (2010) which explains how sensegiving practices of technology mediators might change as the process of technological change progresses.

After framing the IS sensemaking literature, I can now explain how my work contributes to it, by filling the three gaps in the sensemaking literature found by Mesgari & Okoli (2019).

3.2.5. Contributions to the IS sensemaking literature.

As reported in the introduction, Mesgari & Okoli (2019) have found three gaps in the organizational and IS literature, that focus on the missing role of the materiality of technology as artifact, in shaping sensemaking and sensegiving practices. In fact, as the literature focuses instead on cognitive and social aspects of sensemaking, it misses the opportunity to investigate this material aspect, and consequently it misses the chance to study affective, material and situated dimensions of sensemaking that eschew the

limitations of both cognitivist and discursive-constructionist approaches, which are linked to the study of sensemaking either as the ideation of representational cognitive models, or as the study of the influence of social aspects on the development of sensemaking as discourse, which are the theoretical models mainly used to study those two dimensions. To respond to this ontological and epistemological issue, the two authors provide their ecological approach to organizational/technological sensemaking, which is based on critical realism and focuses on "linking individual understandings of technology to the technological settings to which the individual adapts" (Mesgari & Okoli; 2019). They claim that this model can respond to three critical gaps they found in the literature about IS sensemaking, which are related to the main question of the lack of consideration for technological agency in the development of sensemaking and sensegiving practices. These three gaps are:

- Lack of technology materiality;
- Neglect of the discovery aspect of perception;
- Lack of action orientation.

(Mesgari & Okoli; 2019)

With this work, I claim to provide a contribution to these three gaps, in a different way in respect to the one proposed by Mesgari & Okoli (2019). As their work is based on critical realism, instead mine is based on the new materialist concepts of performativity, diffraction and embodiment. My research project therefore contributes to the literature on IS sensemaking by introducing in it the concept of embodiment, and by providing an actionable ontological and epistemological framework for its study, which is capable to fill the gap to the three critical points identified by the two authors. I will now explain how.

The "lack of technology materiality"

This literature gap refers to how the organizational literature misses the opportunity to study the role of technologies in shaping sensemaking phenomena, as stressed by Whiteman & Cooper (2011, p. 892). As said previously, the technology sensemaking community is, as a matter of fact, dominated by socio-cognitive perspectives that are unable to study such phenomena. Consequently, the same issue has been raised by IS authors such as Leonardi, (2011); Benbasat & Zmud (2003); Orlikowski & Iacono (2001). An example of a scholar who tried to overcome this issue, Griffith (1999) studied how technological characteristics helps the development of sensemaking processes, yet in her study she missed the opportunity to study how technology could shape the meaning that actors attach to technologies, focusing instead on the role of technology as a trigger of sensemaking processes. This research project

contributes to this gap in the literature, by framing how technologies play an active role in the formation of sensemaking practices, through their sociomaterial affective agency.

The "neglect of the discovery aspect of perception"

This literature gap points at how in the technological sensemaking literature, the meaning that is ascribed to technologies is always "created" by the human mind, as a form of cognitive models invented in social interactions. Therefore, the role of perception in discovering a meaning already existing outside of the human cognitive models created is neglected in the literature, yet as Weick argues, sensemaking is as much about discovery as it is about creating (1995), therefore in sensemaking, perception should not just be thought as an activity which serves human cognition, but as an endeavour which enacts sensemaking in itself. This point is directly related to the problem of lack of technology materiality, as assuming the active role of technology would mean to overcome the perspective which sees the human mind as the main actor in the sensemaking process, which is related to the socio-cognitive perspectives of organizational/technological sensemaking. My research project fills this gap in the literature, as it argues how sensemaking depends on a non-cognitive process, in which cognition is an agential enactment realised in the assemblage of a working practice that displaces the human mind as the primary knowledge creator, to focus instead on how knowledge, and therefore sense, is made in the sociomaterial affective interaction between human and nonhuman actants. With this perspective, the human mind is displaced, and sense is diffractively made in the body/minds of the researchers, as these intra/act with the research assemblage of technological working practices.

The "lack of action orientation"

This literature gap points at how, because of its socio-cognitive orientation, the IS sensemaking literature does not pay enough attention at how individual or collective actions (and practices) may nurture meaning and therefore sensemaking. In fact, the IS sensemaking literature mainly studies how different ways to frame technologies enact different practices (Hou, 2008; Hsiao et al.; 2008), and mainly consider practices because of sensemaking, and not as an anticipator. According to Weick (2000), actions are an important part of sensemaking, because it is through actions that users discover the meaning already present in the environment, accordingly to the second point here, so actions as generators of sense must be studied too. This research project responds to this problem, as it assumes that knowledge is produced in practice as collective knowledgeable doing (Gherardi; 2019). Knowledge, therefore, sensemaking, is an ongoing sociomaterial endeavour, known as "knowing-in-practice": practices becomes therefore the situ of sensemaking and the focus point of its analysis.

4. IMPLICATIONS FOR MANAGERIAL PRACTICE.

This research project brings three interconnected implications for managers and their practices:

- The first and main one is about providing managers with a tool capable of detecting how value is created in a digital working environment, thus opening a way to understand how digital technologies are actively producing value through bodily affects – which are situated feelings as activities that should not be limited in a working environment;

- The second one is about how knowledge is created. Managers should be aware that knowledge creation – and therefore activities such as innovation – is not dependent on the activity of the human mind, but it is rather the production of situated practices;

- The third one is about how business ethics should be implemented in the workplace. This work shows managers that ethics and business rationality are not intertwined but separated, and that this situation can bring both economic benefits to the company and social benefits to the employees.

As stated, the main contribution that this research project brings to managers, is that it provides them with a tool capable to detect how value is created as digital technologies change the ways in which work is executed. Following the premise of this research project, as the amount of added value dependent on production costs is declining because of the influence of automation, which is driving production costs to zero, the strategic focus of value creation steers towards the production of "intangibles" resources (Arvidsson; 2010). Therefore, as digital technologies change the nature of global value production by putting "intangibles" at its core, it becomes crucial to develop a method capable to detect how this new value is being created. As seen in the introduction chapter, the production of "intangibles" relies on the capacity of a network to sustain itself and perdure, and this is ultimately related to the intensity of the affects that are involved in these networks (Arvidsson & Peitersen; 2013). Examples of this situation are, the level of fidelity that is created among the fanbase of a determined fashion brand, or, as in the case of this study, the commitment and attention given by a network of colleagues to the creation of meaningful forms of collaboration aimed at the development of new products, or to innovation. So far, managers have measured the emergence of these intensities by using methods such as network analysis, sentiment analysis or social buttons analysis (Arvidsson & Peitersen; 2013) which were uncapable to study the immanent conditions of the emergence of these affects, focusing instead on their measure for marketing purposes. The posthuman approach to practice employed by this work provides managers with a tool that understands how social networks for value creation – and therefore, value itself - are established

through affective intensities. In fact, as the affective intensity grows, the more valuable the social network becomes because of its increased ability (and therefore, the ability of the affective investment) to sustain those networks and thus produce these assets: a posthuman practice approach can study these processes of production of affective intensities, and managers can therefore draw insights from its functioning to implement appropriate managerial policies for value creation.

The second managerial implication that this work brings is about how managers should conceive knowledge creation and implement policies aimed at its maximization. The results of this research project suggests, in fact, that knowledge is not an activity that is produced in the human mind through processes of cognitive activity, as it is represented in the tradition coming from Enlightenment, that sees the creator as a solitary man (I did not mention this gender by chance) surrounded by thousands of books. Instead, because of the agency of digital technologies on work, knowledge is made in sociomaterial practices, through a specific way of connecting human and nonhuman elements in a specific working practice that takes place in a defined working setting. Knowledge is therefore embedded and embodied in situated practices, it is sensory and consequently practitioners should be aware of this situation in their activities. This contribution is particularly relevant because the "intangible" assets that are the source of value, are forms of knowledge, such as it is the capacity to innovate (Arvidsson & Peitersen; 2013): managers must therefore account for the embodied nature of knowledge, and for its creation in social networks.

The last managerial implication of this work is in regard of the importance of ethics for business practices. The post-epistemology of practices based on an ethico-onto-epistemology of this work in fact shows how ethics are fundamentals for the establishment of those social networks which create "intangibles", therefore valuable knowledge. Furthermore, it shows that ethics are immanent, embodied and situated in practices, rather than transcendent and universally applicable, as they are conceived in the traditional framework of business ethics. From this situation, it comes the fact that ethical positions should not be implemented by managers with a secondary importance in respect to the maximization of corporate rationality in regard of profits maximization, yet ethics in working practices should always be included in organizational and strategic thinking, but not as aimed at realising an external moral judgment dependent on the needs of the corporation, yet as an effort aimed at caring about the needs of each human and nonhuman pertaining to a determinate working setting, as this can increase the levels of affective intensity and, consequently, value creation through the development of "intangible" assets. In the context of an "ethical economy", a posthuman approach to working practices becomes a tool capable to analyse how ethics actively participate in the creation of value, thus managers should use this approach to practices to

understand how ethics should be implemented in the operations of the company, for the benefit of the company and its workers.

Conclusions

1. SUMMARY OF RESEARCH.

1.2. What did I do? What did I find?

In this research project, I proposed to follow the sociomaterial process that allows value to emerge, as this changes its nature in the context of a global information economy. As companies that rely on digital technologies are increasingly using "intangible" assets such as levels of employee collaboration and branding to evaluate their working operations, rather than using for this purpose measures such as labour time, the nature of value production is changing, as the nature of labour is being modified. To follow the emergence of this new value, I decided to study how digital technologies are changing working practices in multiple settings, including both industrial and academic ones. To complete this task, I took advantage of Silvia Gherardi's posthuman approach to practices (2019) as a theoretical framework capable to account for the sociomaterial agency of digital technologies, and I executed 44 semi-structured interviews, both online and in-person, video recorded and in-person, in the aforementioned settings, aimed at exploring the relationship between workers and technologies and the ways in which the labourers executed their duties in daily routines. The research results showed how digital technologies are actively affecting four different conditions of working, which I thus deem to be "posthuman" because of their sociomaterial determination (working as collective and individual activities, working as action of knowledge creation, working as an activity situated in space and time). In fact, the sociomateriality of technologies is influencing these conditions as it is contributing to the embodied formation of the structural characteristics (Motivation for the Practice and Directedness of Attention), of the practices related to them (Persuading, Controlling, Searching, Choosing Space/Time) – thus, of the practices themselves. By doing this, technologies are ultimately allowing the emergence of the "intangible" assets that constitute a new form of economic value, in the form of Knowledge, Flexibility and Brand, accordingly to the "Ethical Economy" framework described in the introduction chapter of this Thesis.

During the data analysis stage of the research, which I executed through a Reflexive Thematic Analysis endowed by an affective sensibility, I concluded that digital technologies were influencing these conditions of working, because I affectively attuned myself to the affective atmosphere of the working practices as these were sociomaterially emerging from the data I collected, placed in the interviews, the audio/video recording, the pictures of the settings and my own memory.

In this research project, I assumed digital agency to be related to forms of affective "intensity" intended as bodily states of arousal, linked to specific configurations of social and material arrangements located

in space and time within a practice (the structural characteristic of the practice). By affectively attuning myself to the mood of a working practice, I have been able to make this affective intensity resonate in my body and mind through an operation of "worlding" (Stewart; 2007) of determined "affective atmospheres" (Gherardi; 2017) in a non-representational text, as these atmospheres were created by forms of affective vitality such as their resonance, rhythms and intensities, defined in the "intra/activity" between humans and nonhumans. By doing this, I managed to understand how digital technologies were changing working practices and consequently, creating new economic value related to these affects.

According to the framework on "posthuman" practices that I adopted for my work these affective intensities, or "affects", are bodily feelings dependent on specific sociomaterial relations realised in practices, which co-constitute digital agency over working practices as they become the decisive element in the constitution of those social networks which create the "intangible" assets on which this "posthuman" economic value is formed. In fact, according to the theoretical framework of this research, value and affects coincide in the digital economy (Negri & Hardt; 1999), and a posthuman approach to practices can detect their emergence in a digital working practice.

By building on the theoretical foundations of this theory of value as affects that can be found in authors such as Arvidsson and Peitersen (2013), who follow in the footsteps of authors such as Negri & Hardt (1999) and Lazzarato (1997), who have inspired this research project, I eventually exposed how this affective value is formed, an endeavour so far unattended in the field of management and organization studies. I did this as I was looking for a way to show how value is – and could be - created in the context of the Fourth Industrial Revolution, so that in the future it will be possible to implement socially and economically sustainable ways to managing and organising, as this work shows how these new technologies could be used according to their full - and inherently socially and economically disruptive - potential.

After this introduction, I can eventually claim that this work shows how digital technologies are actively participating in value creation as they co-create new working practices in the context of four different posthuman conditions of working, and it also shows how, for that reason, value creation in digital working practices is an affective endeavour, given how affectivity is the element that allows that process of sociomaterial change to stay together and to create value. Thus, this work also exposes the affective nature of value, as it shows how value co-creation in digital working practices relies on embodied, affective and situated practices that emerge as human and nonhuman actors interact within those practices.

1.3. Summary of Contributions

By answering the research questions, this research projects brings two contributions to the literature:

It introduces an empirical example of a practice-based study in the field of B2B vale co-creation and, with it, a new theory/methodology of affective value emergence in the field, and opens a way towards the establishment of affective value as new "general equivalent" of economic value.

As I provide an empirical example of a practice-based study of B2B value co-creation, the main contribution brought to this literature by this work is about providing a theoretical (and methodological, considering the peculiar intertwinement of ontology and epistemology in the context of the ethico-onto-epistemology on which the posthuman approach to practices is based) framework capable of accounting for the formation of affective value. By doing this, I also responded to the question advanced by Arvidsson & Peitersen in regard of a study capable of explaining the formation of affective value (Arvidsson & Peitersen; 2013, Arvidsson & Colleoni; 2012), so that it will be possible, in the future, to exploit this measure as a new value standard (Arvidsson; 2008, 2012). This work therefore gives a contribute towards the establishment of a new general rule for the evaluation of this value. A new "General Sentiment" as objectification of affects for commercial purposes advanced through different measures of affects measurement is slowly becoming the new "General Equivalent" around which economic value is evaluated, instead of labour time (Arvidsson & Peitersen; 2013), but this new source of value is still unable to replace this last measure of value, because it lacks stabilization. This depends on the fact that the origin of this value, before this research project emerged, were unknown, and therefore branding agencies use different forms of measurement, based on methods such as sentiment and network analysis, without having an agreement on a shared measurement method, because of their different assumptions on the formation of affective value. This work instead shows how affective value is formed and thus intervenes in this debate, by advancing a method to understand how to stabilise affects as new general measure of economic value, as it proposes a new theory and methodological tool capable, in future developments, to allow the maximization of the production of this value.

This research has brought this contribute as it advanced new developments in the field of value co-creation in B2B contexts based on practice-based studies. The literature was, in fact, lacking a practice-based theory of value co-creation in B2B contexts and, until this work, it missed an example of an empirical study based on this theory (Kohtamäki & Rajala; 2016, Saha et al.; 2022). An important corollary to this contribution is that, by introducing a posthuman practice-based approach in the field of B2B value

co-creation, this work introduces an Actor-Network Theory (ANT) inspired approach to the study of value co-creation, which is capable to account for the active engagement of digital technologies in the production of value, yet it does not stop here. In fact, the Service-Dominant Logic (SDL) that underpins the theorization on value co-creation so far has focused only on the analysis of the relationships between actors, without focusing on their role in those relationships (Kohtamäki & Rajala; 2016). With its ethico-onto-epistemology, this research project instead brings to the field a framework capable to account for how human and nonhuman actors exerts affective agency in a practice, as they come together in that practice and their subjectivity is formed in virtue of such affective agency. This approach does this as it surpasses the theoretical limitations of the "flat ontology" constituted by ANT, which appoints to every human and nonhuman agent the same kind of affective agency. An ethico-onto-epistemology, in fact, does not limit itself in tracking the relationships between humans and nonhumans in the assemblage under study; yet, because it admits the situatedness of research practices and therefore, of the researcher's ethics, it is capable to acknowledge for the co-constitutive role of human and nonhuman subjects on the phenomena under study, as these agents emerge from the agential intra/actions of the research assemblage. For this reason, this approach recognizes how different actors contribute differently to the formation of the practice as agencement (Gherardi; 2019), because the contribution of ethics highlights their different levels of agency in the practice. This makes possible to define the approach to value co-creation as posthuman practices a critical one.

Moreover, this research project also brings a methodological contribution in the field of value co-creation and, therefore, in the sub-field of B2B value co-creation. It does so by providing a performative methodology based on the re-production of affects in the context of a posthuman working practice, with these affects being the main drivers of practices of value co-creation. Posthuman practices become the main point of analysis, rather than "humans and their practices" cognitively defined, in the context of a relational methodology that considers how human and nonhuman actors come together in a practice, and because of their mutual affectivity, come to define each other. As this process also accounts for the presence of the researcher and its "agential cuts" in the definition of a practice, this means that this work brings in the literature a methodology which eschews the limitations of methodologies coming from realist ontologies and positivist epistemologies, which nowadays are mainstream in the field (Kohtamäki & Rajala; 2016), to focus instead on a methodology based on embodiment and embodied practices as carriers of value co-creation.

As it shows how digital technologies influence knowledge creation, it introduces the concept of embodiment in the literature on IS sensemaking, as embodied sensemaking enacted in posthuman practices.

The contribute that this research brings to the IS literature on sensemaking (which comprises contributions from the technological and organizational literatures on sensemaking) is about showing how the affective agency of digital technologies enacts a form of embodied, performative and situated sensemaking on organizational phenomena, and therefore also on technology itself. As technology can be considered one of these organizational phenomena, alongside others such as power or organizational culture (Mesgari & Okoli; 2019), my research has found that, as organizational factors (which include technologies) contribute to shape the meaning that humans attach to technology, technological features contribute to shape how humans subjectivise technology and the other social aspects of organizational life through embodied and situated practices, as its affective influence contributes to create practical knowledge- thus, sense. By introducing the concept of embodiment in the IS sensemaking literature, it brings a new theoretical standpoint in it, as the current literature is mainly focused on studying sensemaking from cognitivist and discursive-constructions perspectives (Mesgari & Okoli; 2019). From this main contribution, my research responds to three gaps that Mesgari & Okoli (2019) have found in the organizational and IS literature, that generate from this missing consideration for the role of the materiality of technology in shaping sensemaking and sensegiving practices.

These three gaps are:

- Lack of technology materiality;
- Neglect of the discovery aspect of perception;
- Lack of action orientation.

(Mesgari & Okoli; 2019)

The "lack of technology materiality" gap indicates how the literature misses the opportunity to study the role of technologies in shaping sensemaking (Whiteman & Cooper; 2011, p. 892), as it has been highlighted by IS authors such as Leonardi, (2011); Benbasat & Zmud (2003); Orlikowski & Iacono (2001). This research project contributes to this gap by analysing how technologies play an active role in the formation of sensemaking practices, through a sociomaterial affective agency that expresses itself through embodied ways to create practical knowledge.

The "neglect of the discovery aspect of perception" literature gap points at how, in the IS sensemaking literature, perception is conceived as an activity that "feeds" human cognition, and therefore is a concept

that supports the idea of sensemaking as coming from the human mind; rather, this work assumes that perception is an activity that enacts sensemaking in itself, as argued also by Weick (1995). Directly related to the contribute that I claim this research project brings as a solution to the problem of lack of technology materiality, I state that considering the active role of technology in enacting sensemaking means framing sensemaking as an embodied non-cognitive process. Sense is made in the sociomaterial affective interaction between human and nonhuman actants, and it is diffractively created in the body/minds of the researchers, as these intra/act with the research assemblage of technological working practices. Thanks to this phenomenon, perception is not anymore subsumed to cognition in the explanation of sensemaking processes, as it has been so far sustained by a literature founded on socio-cognitive perspectives of IS sensemaking.

The "lack of action orientation" literature gap points at how the literature does not pay enough attention at how sensemaking may be dependent on individual or collective actions (and practices). In fact, the IS sensemaking literature tends to consider practices as coming after sensemaking, therefore as a series of activities that the individuals enacts after in their minds, they make sense of organizational phenomena. Following Weick (2000), who states how actions empower users in discovering meaning already present in the environment, this results in the necessity of studying actions, or practices, as enactors of meaning and sense. As this project knowledge to be produced in practices, as collective knowledgeable doing (Gherardi; 2019), it assumes knowledge as "knowing-in-practice", as practical knowledge advanced by specific agential cuts in an affective assemblage. Practices therefore become the place of sensemaking, and to understand how this emerges, this project assumes practices as the fundamental unit of analysis.

2. LIMITATIONS AND FUTURE RESEARCH

2.1. Limitations and future research.

The limitations that emerge for this study are in regard of the adopted methodology for data collection and the overall research approach.

I did not manage to collect data through an affective, performative ethnography as I planned at the initial stages of the research, so I only gathered limited data. In fact, an affective ethnography would have allowed me to gain more fine-grained data. Moreover, by performing an ethnography I would have been able to stage affective "experiments", either intentional or unintentional, such as the staging of certain working situations, to better understand how affects emerged from the practices under study (Gherardi; 2019).

Another limitation is in regard of the research design I adopted for my interviews. Due to the cross-sectional nature of my research project, in fact, I could not follow the process of sociomaterial change and affect emergence in different time frames; this prevented me from tracking the relationships of non-linear causation between specific arrangements of human/nonhuman actors in the agencement of a practice and affects; instead in this research project I could only focus on how affects emerged as digital technologies interacted with the structural characteristics of digital working practices within determined "posthuman" conditions of working. For the same reason, adopting a multiple case study approach would have benefited this research, as by comparing affects emergence from different settings I could have obtained a better understanding of these patterns of non-linear causation.

A similar limitation can be found in the post-qualitative nature of this research project. By focusing on semi-structured interviews and the other methods of data collection, in fact, I chose not to adopt a quantitative or mixed method, which could have provided me with more detail in regard of the scope of my research. For instance, by adopting a quantitative methodology I could have also let the material "speak", and not only the social, thus realising more accurately Haraway's vision of humans as "cyborgs" in the human/nonhuman entanglement (Haraway; 1991), and I could have assessed the performativity of that entanglement in ways that could have allowed me to understand the performative role of every digital technology involved in the research assemblage in affect emergence. For instance, by checking the amount of data produced by a certain feature of a certain technology involved in a determined practice, I could have assessed how that technology is enacting affective intensities, with relevant implications for framing future ways of working and organizing.

Coming to the first suggestion for future research, it is now necessary to find a way to stabilize this new affective value as a new general standard of value, now that, thanks to this research project, it is possible to study how it emerges and thus, for practitioners at consultancies, to understand if a company and their operations are valuable or not on the basis of an understanding of the emergence of specific affective intensities correspondent to "intangible" resources. An interesting contribute in this sense, would be to study how these practitioners, such as market evaluators or brand analysts, evaluate the relationship between value and affect, so that in the future it would be possible to connect affective value as intensities with the evaluation tools such as Network and Sentiment analysis which are at the centre of the formation of the "General Sentiment" as a general measure of affective value, and thus reputation of the company (Arvidsson; 2012). By doing so, it would be possible to implement new ways to quantify affects as intensities in the new, emerging "General Equivalent" of value. A further contribution in this sense would be to quantitatively study "Big Data" (Bollier; 2010), to analyse long term relationships between the

emergence of online sentiment, the reputation of the company, and the asset prices (Arvidsson & Colleoni; 2012).

Eventually, to help establish the formation of affects as intensities at the centre of new evaluation methodologies of affect, it would be necessary to study, from a sociomaterial perspective, how social media platforms such as Facebook or Instagram (and their algorithms) are producing the parameters of distribution of financial value (which is the value ultimately produced by "intangibles"), as they are allowing affects to be objectified into brands, for instance, that are justifying financial evaluations. By doing this, it will be possible to understand how to gear these platforms towards the production of a new set of parameters for distribution of this value, as by considering the political accountability of social media networks in this operation it would be possible to realise a specific "Dingpolitik" for such platforms (Latour; 2005). This "politic of things" would make possible to connect these platforms to the production of an affective, distributed and relational value, thus making them capable to distribute that value in different ways, as these would be able to measure differently the "worth" of individuals and companies.

A further future contribution could be given in regard of finding new ways to maximise the production of affective value, by finding new ways of working and organizing. One way to do this, would be by experimental research methods, such as simulations, role plays, or creative interventions, to understand which elements involved in the assemblage allow the emergence of a higher number of affects, or more intense ones. To keep using the "cyborg" metaphor introduced by Haraway (1991), in fact, it would be possible to study how the performativity of the sociomaterial entanglement changes in the presence – or absence – of determined affective agents, or practices with their structural characteristics, within the sociomaterial assemblage under study, thus making possible to understand which of those elements allows to maximise the production of affective intensities. To make an example of how this could work, it would be possible to organize an experiment of the "persuading" practice by changing its setting: one in person, and the other online; then, it would be possible to understand which setting allows the emergence of a stronger or weaker affective atmosphere – and thus, to produce more or less value. Another interesting study in this regard, would be one about how companies are currently exploiting, if they are doing so, affect emergence for the sake of value creation in their working practices.

Lastly, future contributions could study how affective value related to intensities such as hopes or fears are created in different contexts. For instance, a study on B2C (Business To Customer) practices could allow to study how affective value related to intangibles emerges in that context, and make possible for businesses to have a tool to understand how to implement different strategies for maximizing that value.

Furthermore, a study focused on specific technologies, for example those related to Industry 4.0, could investigate how these are changing the nature of value because of their sociomaterial affectivity, and thus obtain important information about how to implement the best strategy to take advantage of this shift.

Appendices

    1- <u>Critical Realism in Sociomateriality in IS studies</u>

The Critical Realist view of sociomateriality in IS departs from the Agential Realist view, which founded the field and stands in opposition with it (Elbanna; 2016, Niemimaa; 2018). Invented by organizational scholar Paul M. Leonardi (2012, 2013), the Critical Realist position also assumes that practices are the place where the social and the material become constitutively entangled (Leonardi; 2013), but his theorising is ultimately grounded on substantialist assumptions (Cecez-Kecmanovic; 2014, Elbanna; 2016). This ontology assumes the social and the material as composed of "substances" which makes of them autonomous entities; then they enter dynamic relations (Emirbayer; 1997). These relations are information exchanges, which only affect the nonessential properties of the social and material elements involved in the practice, therefore these relations do not change their "substances", or what they are (Cecez-Kecmanovic; 2014, Leonardi; 2012). For this reason, this school of sociomaterial thought is based on what is called a "weak" form of relationality (Niemimaa; 2018).

As the Agential Realist school, also the Critical Realist one is interested in studying the relationship between human and nonhuman agencies (Leonardi; 2011). In this regard, Leonardi assumes that, whereas human and nonhuman agencies are discrete, these agential elements can have effects only whenever they are mutually entwined (Cecez-Kecmanovic; 2014). To pin down this concept, Leonardi, by following Sassen (2006), uses the term "imbrication", which describes both the separation between human and nonhuman agencies, and how these can have effects only when weaved together (Elbanna; 2016, Leonardi; 2011). To give a brief definition of what the concept of "imbrication" used by Leonardi entails, this denotes a mode of sociomaterial entanglement which assumes that:

"By keeping the distinction between human and material agencies, the imbrication metaphor asserts a slightly different relationship: people have agency and technologies have agency, but ultimately, people decide how they will respond to a technology."
(Leonardi; 2011)

In this context, materiality exists therefore independently of the people that creates and uses it, and Leonardi suggests how it identifies those properties of a technology which remain unchanged across space and time (Leonardi; 2013); therefore, once a technology is designed and produced, its materiality is fixed and cannot be changed – unless it is structurally modified after production (Cecez-Kecmanovic; 2014). In this context, also the social and material agencies are deemed to have inherent different properties, although they acquire significance only in virtue of their imbrication. In fact, social agency

depends on collective human intentionality, whereas material agency is "how a technology acts" after it receives human input (Leonardi; 2012), and intentionality is therefore the fundamental differential trait between the two forms of agency. For this characteristic, that depends ultimately on its substantialist ontology, this Critical Realist version of sociomateriality in IS studies is deemed to be the continuation of the Sociotechnical Systems approach in IS. I will now describe the Agential realist perspective in the field.

2- A post-epistemology of practices

In fact, a decentralization of the human subject problematises the role of the researcher as a producer of knowledge, as knowledge becomes embodied and situated in practices, as it acknowledges how his/her epistemology, adopted through specific methodologies and research practices, does not create universal, but situated knowledge related to situated actions, thus exposing the politics and ethics of the researchers' epistemology in the research process, and a posthumanist approach to practices makes these elements visible in the creation of the outcome of the research (Gherardi; 2021).

3- Ethics and affects

Incidentally, by executing this task it also opens a way to contribute to the emergent literature on affects in relation to ethics, as my research frameworks shows how the sociomateriality of digital technologies in working practices interacts with political and social elements of the working place, thus making affects emerge as ethical, as these are created in the intra/activity between the researcher, the technological apparatus, the participants, and the embodied ethics that these elements are endowed with.

Bibliography

- Ahmed, S. (2000). 'Embodying Strangers'. In A. Horner and A. Keane (eds) Body Matters: Feminism, Textuality and Corporeality. Manchester: Manchester University Press, pp. 85–97.

- Ahmed, S. (2010). 'Happy Objects', in M. Gregg and G. J. Seigworth (eds). The Affect Theory Reader. London: Duke University Press, pp. 31–51.

- Alaimo, S. (2010). Bodily Natures: Science, Environment, and the Material Self, Indiana University Press, Bloomington and Indianapolis, IN.

- Anderson, B. (1991). Imagined Community: Reflections on the Origin and Spread of Nationalism. London: Verso.

- Anderson, B. (2009). Affective Atmospheres. Emotion, Space and Society, 2(1), pp. 77–81.

- Arvidsson, A. (2009). The ethical economy: Towards a post-capitalist theory of value. Capital & Class. 1(1), pp.1-17.

- Arvidsson, A. (2010). The ethical economy: new forms of value in the information society? Organization. 17(5), pp.637-644.

- Arvidsson, A. (2012). General Sentiment: how value and affect converge in the information economy. Sociological Review. 1(1), pp.1-21.

- Arvidsson, A., Colleoni, E. (2012). Value in Informational Capitalism and on the Internet. The Information Society. 28 (3), 135–50.

- Arvidsson, A.; Peitersen, N. (2013). The Ethical Economy Rebuilding Value After the Crisis. New York: Columbia University Press.

- Ashcraft, K.L., Kuhn, T.R., Cooren, F. (2009). Constitutional Amendments: "Materialising" Organizational Communication. Academy of Management Annals. 3(1), pp. 1-64.

- Athaide, G.A.; Zhang, J.Q. (2011). The Determinants of Seller-Buyer Interactions during New Product Development in Technology-Based Industrial Markets. Journal of Product Innovation Management. 28(s1), pp.146-158.

- Avila-Garzon, C.; Bacca-Acosta, J. Thirty Years of Research and Methodologies in Value Co-Creation and Co-Design. Sustainability 2024, (16), 2360. https://doi.org/10.3390/su16062360.

- Bansler, J. P., & Havn, E. (2004). Technology-use mediation: Making sense of electronic communication in an organizational context. Scandinavian Journal of Information Systems, (16), pp. 57–83.

- Barad, K. (2003). Posthumanist Performativity: Toward an Understanding of How Matter Comes to Matter. Signs: Journal of Women in Culture and Society. 28(3), pp.1-20.

- Barad, K. (2007). Meeting the Universe Halfway. Durham & London: Duke University Press.

- Barad, K. (2010). Quantum entanglements and Hauntological relations of inheritance: Dis/continuities, spacetime enfoldings, and justice-to-come. Derrida Today, 3(1), pp. 240–268.

- Barad, K. (2014). Diffracting diffraction: Cutting together-apart. Parallax, p. 20.

- Barsade, S. G., Ramarajan, L. and Westen, D. (2009). Implicit Affect in Organizations. Research in Organizational Behaviour. 29(1), pp. 135–62.

- Bauwens, M. (2009). Class and Capital in Peer Production. Capital & Class. 33(1), pp.1-21.

- Benbasat, I.; Zmud, R. W. (2003). The identity crisis within the IS discipline: Defining and communicating the discipline's core properties. MIS Quarterly, 27(2), pp. 183–194.

- Benkler, Y.; Nissenbaum, H. (2006). Commons-Based Peer Production and Virtue. Journal of Political Philosophy. 14(4), pp.1-26.

- Bennett, J. (2010). Vibrant Matter - A Political Ecology of Things. Durham: Duke University Press.

- Berlant, L. G. (2011). Cruel Optimism. Durham, NC: Duke University Press.

- Beyes, T. and Steyaert, C. (2012). Spacing Organization: Non-Representational Theory and Performing Organizational Space, Organization (19), pp. 45–61.

- Beyes, T. and Steyaert, C. (2013). Strangely Familiar: The Uncanny and Unsiting Organizational Analysis. Organization Studies. 34(10), pp. 1145–65.

- Beyes, T., De Cock, C. (2017). Adorno's Grey, Taussig's Blue: Colour, Organization and Critical Affect. Organization. 24(1), pp. 59–78.

- Bjørn-Andersen, N., Earl, M., Holst, O., and Mumford, E. (1982). Information Society: For Richer, for Poorer, Amsterdam: North-Holland.

- Blackler, F. (1993). Knowledge and the Theory of Organizations: Organizations as Activity Systems and the Reframing of Management. Journal of Management Studies. 30(6), pp. 864–84.

- Blackman, L. (2008). Affect, Relationality and the Problem of Personality. Theory, Culture & Society. 25(1), pp. 27–51.

- Boell, S.; Cecez-Kecmanovic, D. (2012). CONCEPTUALIZING INFORMATION SYSTEMS: FROM 'INPUT-PROCESSING-OUTPUT' DEVICES TO SOCIOMATERIAL APPARATUSES. ECIS 2012 Proceedings.20. 1(1), pp.1-13.

- Bollier, D., & Firestone, C. M. (2010). The promise and peril of big data. Washington, DC: Aspen Institute, Communications and Society Program. pp. 1-66

- Borch, C. (2010). Organizational Atmospheres: Foam, Affect and Architecture. Organization 17(2), pp. 223–41.

- Bourdieu, P. (1977). Outline of a Theory of Practice, Cambridge, UK: Cambridge University Press.

- Braidotti, R. (2006). The ethics of becoming imperceptible. In C. Boundas (Ed.), Deleuze and Philosophy. Edinburgh: Edinburgh University Press. pp. 133-59.

- Braidotti, R. (2013). The Posthuman. Cambridge, MA: Polity Press.

- Braidotti, R. (2019). A Theoretical Framework for the Critical Posthumanities. Theory, Culture & Society. 36(6), pp.31-61.

- Braun, V.; Clarke, V. (2022). Thematic Analysis: A Practical Guide. London: SAGE.

- Breidbach, C.F.; Maglio, P.P. (2016). Technology-enabled value co-creation: An empirical analysis of actors, resources, and practices. Industrial Marketing Management. 56(1), pp.73-85.

- Brennan, T. (2004). The Transmission of Affect. Ithaca, NY: Cornell University Press.

- Butler, J. (1993). Bodies that Matter: On the Discursive Limits of "Sex". New York: Routledge.

- Butler, J. (1997). The Psychic Life of Power: Theories in Subjection. London: Routledge.

- Callon, M. (1999). Actor-Network Theory: The Market Test. Actor-Network Theory and After, J. Law and J. Hassard (eds.), Oxford, UK: Blackwell and the Sociological Review, pp. 181-195.

- Callon, M. (1986). The Sociology of an Actor-Network: The Case of the Electric Vehicle. Mapping the Dynamics of Science and Technology, M. Callon, J. Law, and A. Rip (eds.), London: MacMillan Press, pp. 19-34.

- Callon, M. (1986b). Some Elements of a Sociology of Translation: Domestication of the Scallops and the Fishermen of Saint Brieuc Bay. Power, Action and Belief: A New Sociology of Knowledge? Sociological Review Monograph (32), J. Law (ed.), London: Routledge and Kegan Paul, pp. 196-233.

- Castells, M. (1997). An introduction to the information age. City. 2(7), pp.6-16.

- Cecez-Kecmanovic, D; Galliers, R.D.; Henfridsson, O.: Newell, S.; Vidgen, R. (2014). The Sociomateriality of Information Systems. MIS Quarterly. 38(3), pp.809-830.

- Chaiklin, S. and Lave, J., eds (1993). Understanding Practice: Perspectives on Activity and Context. Cambridge: Cambridge University Press.

- Chia, R.; MacKay, B. (2007). Post-processual challenges for the emerging strategy-as-practice perspective: Discovering strategy in the logic of practice. Human Relations, 60(1), pp. 217–242.

- Clancy, A., Vince, R. and Gabriel, Y. (2011) That Unwanted Feeling: A Psychodynamic Study of Disappointment in Organizations. British Journal of Management 23(4), pp. 518–531.

- Clough, P.T., Goldberg, G., Schiff, R., Weeks, A. and Willse, C. (2007). Notes Towards a Theory of Affect-Itself. Ephemera: theory & politics in organization 7(1), pp. 60–76.

- Clough, P.T., Halley, J. (eds.) (2007). The Affective Turn. Theorizing the Social. Durham, Duke University Press.

- Cohen, I. J. (1996). Theories of Action and Praxis. B. S. Turner (ed.) The Blackwell Companion to Social Theory. Cambridge: Blackwell Publishers. pp. 111-42.

- Cook S.D., Brown J.S. (1999). Bridging epistemologies: the generative dance between organizational knowledge and organizational knowing. Organization Science, 10(4), pp. 381–400.

- Coole, D.; Frost, S. (2010). Introducing the New Materialisms. In: Coole, D.; Frost, S. (Ed). New Materialisms. London & Durham: Duke University Press. pp.1-43.

- Cunliffe, A.; Coupland, C. (2012). From hero to villain to hero: Making experience sensible through embodied narrative sensemaking. Human Relations. 65(1), pp.63-88.

- Dall'Alba, G.; Sandberg, J. (2021). Bodily grounds of learning: embodying professional practice in biotechnology. Studies in Higher Education. 46(9), pp.1949-1965.

- Davidson, E. (2006). A technological frames perspective on information technology and organizational change. The Journal of Applied Behavioral Science, 42(1), pp. 23–39.

- De Rond, M.; Holeman, I.; Howard-Grenville, J. (2019). Sensemaking from the Body: An Enactive Ethnography of Rowing the Amazon. Academy of Management Journal. 62(6). [Online]. Available at: https://doi.org/10.5465/amj.2017.1417.

- Deleuze, G. (1988). Spinoza: Practical Philosophy. San Francisco: City Lights.

- Deleuze, G. (1997). Essays Critical and Clinical (trans. D. W. Smith and M. A. Greco). Minneapolis, MN: University of Minnesota Press.

- Deleuze. G. (2007), Two Regimes of Madness – Texts and Interviews 1975–1995, trans. M. Taormina & A. Hodges, edited by D. Lapoujade. New York: Semiotext(e).

- Deleuze, G., Guattari, F. (1988). A Thousand Plateaus, London: Athlone.

- Deleuze, G.; Guattari, F. (2023). 1730: Becoming-Intense, Becoming-Animal, Becoming-Imperceptible.... In: Bloomsbury Academics. (Ed). A Thousand Plateaux. 14th ed. London: Bloomsbury Publishing Plc. pp.271-360.

- DeSanctis, G.; Poole, M. S. (1994). Capturing the complexity in advanced technology use: Adaptive structuration theory. Organization Science, 5(2), pp. 121–147.

- Dolphijn, R., Van der Tuin, I. (2012). New Materialism: Interviews and Cartographies. Ann Arbor, Open Humanities Press.

- Eikeland, O. and Nicolini, D. (2011). Introduction. Turning Practically: Broadening the Horizon, Journal of Organizational Change Management 24(2), pp. 164–74.

- Elbanna, A. (2016). Doing Sociomateriality Research in Information Systems. The DATA BASE for Advances in Information Systems. 47(4), pp.1-9.

- Emirbayer, M. (1997). "Manifesto for a Relational Sociology," American Journal of Sociology. 103(2), pp. 281-317.

- Enang, E.; Sminia, H.; Gherardi, S.; Zhang, Y. (2023). Unpacking researchers' embodied sensemaking: A diffractive reading-writing of Mann Gulch disaster. Scandinavian Journal of Management. 39(1), pp.1-10.

- Fotaki, M. (2006). Choice Is Yours: A Psychodynamic Exploration of Health Policy Making and Its Consequences for the English National Health Service. Human Relations. 59(12), pp. 1711–44.

- Fotaki, M. (2014). Can Consumer Choice Replace Trust in the National Health Service in England? Towards Developing an Affective Psychosocial Conception of Trust in Health Care. Sociology of Health & Illness 36(8), pp. 1276–94.

- Fotaki, M., Kenny, K. and Visholm, S. (2013). Sub-theme 40: Affect at Work: Psychosocial Approaches to Organizations and Organizing, EGOS Conference Montreal, July 2013.

- Fotaki, M., Long, S. and Schwartz, H. S. (2012). What Can Psychoanalysis Offer Organization Studies Today? Taking Stock of Current Developments and Thinking About Future Directions. Organization Studies. 33(9), pp. 1104–20.

- Fotaki, M.; Kenny, K.; Vachhani S.J. (2017). Thinking critically about affect in organization studies: Why it matters. Organization. 24(1), pp.3-17.

- Foucault, M. (1978). Discipline and Punish: The Birth of the Prison. New York: Vintage Press.

- Fox, N.J. and Alldred, P. (2014). New materialist social inquiry: designs, methods and the research assemblage. International Journal of Social Research Methodology, DOI: 10.1080/13645579.2014.921458.

- Fox, N.J.; Alldred, P. (2018). Mixed methods, materialism and the micropolitics of the research-assemblage. International Journal of Social Research Methodology. 21(2), pp.191-204.

- Fox, N.J.; Alldred, P. (2018). New Materialism. In: Atkinson, P.A., Delamont, S., Hardy, M.A. and Williams, M. (Ed). The SAGE Encyclopedia of Research Methods. London: Sage. pp.1-16.

- Gabriel, Y. (2014). Disclosing Affect: A Freudian Inquiry into Organizational Storytelling. In K. Kenny and M. Fotaki (eds), The Psychosocial and Organization Studies: Affect at Work. Basingstoke: Palgrave Macmillan, pp. 83–103.

- Gagliardi, P. (1996). Exploring the aesthetic side of organizational life. In S. R. Clegg, C. Hardy, & W. R. Nord (Eds.). Handbook of organization studies. London, U.K.: SAGE, pp. 565–580.

- Gäre, K.; Melin, U. (2013). Sociomaterial actors in the assimilation gap: A case study of web service, management and IT-assimilation. Information Systems & E-Business Management. 11(4), pp. 481–506.

- Garfinkel, H. (1967). Studies in Ethnomethodology, 2nd ed. Englewood Cliffs, NJ: Prentice Hall.

- Gephart, R. P. (2004). Sensemaking and new media at work. American Behavioral Scientist, 48(4), pp. 479–495.

- Gherardi, S. (2006). Organizational Knowledge: The Texture of Workplace Learning. Oxford: Blackwell.

- Gherardi, S. (2009). Practice? It's a Matter of Taste! Management Learning. 40(5), pp. 535–50.

- Gherardi, S. (2016). To start practice theorizing anew: The contribution of the concepts of agencement and formativeness. Organization. 23(5), pp. 680-698.

- Gherardi, S. (2016b). SOCIOMATERIALITY IN POSTHUMAN PRACTICE THEORY. Hui, S.; Shove, E.; Schatzki, T. (Ed). The Nexus of Practices: Connections, Constellations, and Practitioners. London: Routledge. pp. 38-52.

- Gherardi, S. (2017). One turn… and now another one: Do the turn to practice and the turn to affect have something in common?. Management Learning. 48(3), pp. 345-358.

- Gherardi, S. (2017b). Which is the place of affect within practice-based studies? M@n@gement. 20(2), pp. 208-220.

- Gherardi, S. (2019). How to conduct a practice-based study. 2nd ed. Cheltenham: Edward Elgar Publishing Ltd.

- Gherardi, S. (2019b): Practice as a collective and knowledgeable doing. Siegen: Universität Siegen: SFB 1187 Medien der Kooperation (SFB 1187 Medien der Kooperation – Working Paper Series 8). DOI: https://doi.org/10.25969/mediarep/12641.

- Gherardi, S. (2021). A Posthumanist Epistemology of Practice. In: Neesham, C.; Segal, S. (Ed). Handbook of Philosophy of Management. Switzerland: Springer Nature Switzerland. pp.1-21.

- Gherardi, S., Laasch, O. (2021b). Responsible Management-as-Practice: Mobilizing a Posthumanist Approach. Journal of Business Ethics. 181(1), pp.269-281.

- Gherardi, S.; Murgia, A.; Bellé, E.; Miele, F.; Carreri, A. (2016). Tracking the sociomaterial traces of affect at the crossroads of affect and practice theories. Qualitative Research in Organizations and Management. 14(3), pp.295-316.

- Gherardi, S.; Strati, A. (2017). Luigi Pareyson's Estetica: Teoria della formatività and Its Implications for Organization Studies. Academy of Management Review. 42(4), pp.745-755.

- Gibbs, A. (2016). Writing as Method: Attunement, Resonance and Rhythm. In: Carsten Stage, Britta Timm Knudsen. (Ed). Affective Methodologies: Developing Cultural Research Strategies for the Study o. New York: Palgrave Macmillan. pp.222-236.

- Giddens, A. (1984). The Constitution of Society: Outline of a Theory of Structuration. Cambridge: Polity Press.

- Griffith, T. L. (1999). Technology features as triggers for sensemaking. Academy of Management Review, 24(3), pp. 472–488.

- Grosz, E. (2004). The Nick of Time: Politics, Evolution and the Untimely. Durham, NC: Duke University Press.

- Guzman G. (2013). The grey textures of practice and knowledge: review and framework. Eur Bus Rev 25(5), pp. 429–452.

- Haraway D. (1988). Situated knowledges: The science question in feminism and the privilege of partial perspective. Feminist Studies. 14(3), pp. 575–599.

- Haraway, D. (1991). A cyborg manifesto. Simians, cyborgs, and women: The reinvention of nature, 14941.

- Haraway, D. (2015). Anthropocene, Capitalocene, Plantationocene, Chthulucene: Making Kin. Environmental Humanities. 6(1), pp.159-165.

- Harding, N. (2007). On Lacan and the "Becoming-ness" of Organizations/Selves. Organization Studies. 28(1), pp.1761–73.

- Heidegger, M. (1962). Being and Time (translated by John Macquarrie and Edward Robinson), New York: Harper and Row.

- Hjorth, D., Pelzer, P. (2007). The Fate of Phateon: Baroque Art for Management's Sake? Organization 14(6), pp. 869–86.

- Hou, S.-T. (2008). Triggering the sources and consequences of technology sense-making: A case study on the GPS dispatching system in Taipei. In 4th IEEE international conference on management of innovation and technology, 2008. ICMIT 2008. pp. 53–58. doi:10.1109/ICMIT.2008.4654336

- Hsiao, R.-L.; Wu, S.-H.; Hou, S.-T. (2008). Sensitive cabbies: Ongoing sense-making within technology structuring. Information and Organization. 18(4), pp. 251–279.

- Huang, J., Newell, S., Huang, J., and Pan, S. (2014). Site-Shifting as the Source of Ambidexterity: Empirical Insights from the Field of Ticketing. Journal of Strategic Information Systems. 23(1), pp. 29-44.

- Introna, L. D. (2011). The Inframing of Code: Agency, Originality and the Plagiarist. Theory, Culture and Society. 28(6), pp. 113-141.

- Introna, L. D. (2013). Otherness and the Letting-Be of Becoming: Or Ethics Beyond Bifurcation. How Matter Matters: Objects, Artifacts, and Materiality in Organization Studies, P. R. Carlile, D. Nicolini, A. Langley, and H. Tsoukas (eds.), Oxford, UK: Oxford University Press, pp. 260-287.

- Introna, L. D. (2019). On the making of sense in sensemaking: Decentred sensemaking in the meshwork of life. Organization Studies. 40(5), pp. 745–764.

- Jarzabkowski, P. A., Whittington, R. (2008). Hard to disagree, mostly. Strategic Organization. 6(1), pp. 101–106.

- Jarzabkowski, P.; Spee, A. P. (2009). Strategy-as-practice: A review and future directions for the field. International Journal of Management Reviews, 11(1), pp. 69–95.

- Jenkins, R. (2000). Disenchantment, Enchantment and Re-Enchantment: Max Weber at the Millennium. Max Weber Studies. 1(1), pp.11-32.

- Jensen, T.; Mahmud, Y. (2023). Decentering sensemaking: The Mann Gulch disaster revisited. Scandinavian Journal of Management. 39(1), pp.1-9.

- Joas, H. (1997). Pragmatism and Social Theory. Chicago, IL: University of Chicago Press.

- Karsten, H.; Laine, A. (2007). User interpretations of future information system use: A snapshot with technological frames. International Journal of Medical Informatics. 76(1), pp. 136–140.

- Karteemo, V.; Helkkula, H. (2018). A Systematic Review of Artificial Intelligence and Robots in Value Co-creation: Current Status and Future Research Avenu. Journal of Creating Value. 4(2), pp. 211 - 228.

- Kenny, K. (2010). Beyond Ourselves: Passion and the Dark Side of Identification in an Ethical Organization. Human Relations (63), pp. 857–73.

- Kenny, K., Scriver, S. (2012). Dangerously Empty? Hegemony and the Construction of the Irish Entrepreneur. Organization. 19(5), pp. 615–33.

- Kenny, K., Fotaki, M. (2015). From Gendered Organizations to Compassionate Borderspaces: Reading Corporeal Ethics with Bracha Ettinger. Organization. 22(2), pp. 183–199.

- Kenny, K., Fotaki, M. (eds) (2014). The Psychosocial and Organization Studies: Affect at Work. Basingstoke: Palgrave Macmillan.

- Kohtamäki, M.; Partanen, J.; Parida, V.; Wincent, J. (2013). Non-linear relationship between industrial service offering and sales growth: The moderating role of network capabilities. Industrial Marketing Management. 42(8), pp.1374-1385.

- Kohtamäki, M.; Rajala, R. (2016). Theory and practice of value co-creation in B2B systems. Industrial Marketing Management. 1(1), pp.4-13.

- Komporozos-Athanasiou, A., Fotaki, M. (2015). A Theory of Imagination for Organization Studies Using the Work of Cornelius Castoriadis. Organization Studies, 36(3), pp. 321–42.

- Komporozos-Athanasiou, A., Fotaki, M. and Thompson, M. (2014). Sub-theme 49: Affective Ontologies for Performative Organizations. EGOS Conference, Rotterdam, July 2014.

- Kuhn, T., Ashcraft, K.L., Cooren, F. (2017). The Work of Communication: Relational Perspectives on Working and Organizing in Contemporary Capitalism. London: Routledge.

- Latour, B. (1990). Drawing things together. In M. Lynch and S. Woolgar (eds). Representation in Scientific Practice. Cambridge. MIT Press. pp. 19-68.

- Latour, B. (1992). Where Are the Missing Masses? Sociology of a Few Mundane Artefacts, in W. Bijker. and J. Law (eds) Shaping Technology, Building Society: Studies in Sociotechnical Change, pp. 225–58. Cambridge, MA: MIT Press.

- Latour, B. (2005). Reassembling the Social: An Introduction to Actor-Network-Theory, Oxford, UK: Oxford University Press.

- Law, J. (1994). Organizing Modernity. Oxford: Blackwell.

- Law, J. (2004). After Method: Mess in Social Science Research, London: Routledge.

- Lazzarato, M. (1997). Lavoro immateriale. Verona: Ombre Corte.

- Leonardi, P. M. (2011). When flexible routines meet flexible technologies: Affordance, constraint, and the imbrication of human and material agencies. MIS Quarterly. 35(1), pp. 147–176.

- Leonardi, P. M. (2012). Materiality, Sociomateriality, and Socio-Technical Systems: What Do These Terms Mean? How Are They Different? Materiality and Organizing: Social Interaction in a Technological World, P. M. Leonardi, B. A. Nardi, and J. Kallinikos (eds.). Oxford, UK: Oxford University Press, pp. 25-48.

- Leonardi, P.M. (2013). Theoretical foundations for the study of sociomateriality. Information and Organization. 23(2), pp.59-76.

- Lombardo, S.; Cabiddu, F. (2017). What's in it for me? Capital, value and co-creation practices. Industrial Marketing Management. 61(217), pp.155-169.

- Lorimer, H. (2005). Cultural Geography: The Busyness of Being 'More-Than-Representational'. Progress in human geography, 29(1), pp. 83-94.

- Louis, M. R. (1980). Surprise and sense making: What newcomers experience in entering unfamiliar organizational settings. Administrative Science Quarterly, 25(2), pp. 226–251.

- Lykke, N. (2011). The timeliness of post-constructionism. NORA – Nordic Journal of Feminist and Gender Research. 18(2), pp. 131-136.

- Manning, E. (2009). Relationscapes: Movement, Art, Philosophy. Cambridge, MA: MIT.

- Massumi, B. (1995). The Autonomy of Affect. Cultural Critique. 31(1), pp.83-109.

- Massumi, B. (1996). The Autonomy of Affect. In P. Patton (ed.) Deleuze: A Critical Reader, pp. 217–39. Oxford: Blackwell.

- Massumi, B. (2002). Parables for the Virtual: Movement, Affect, Sensation. Durham, NC: Duke University Press.

- Massumi, B. (2018). 99 Theses on the Revaluation of Value - A Postcapitalist Manifesto. Minneapolis: University of Minnesota Press.

- Massumi, P. (2010). The Future Birth of the Affective Fact: The Political Ontology of Threat. In M. Gregg and G. Seigworth (eds). The Affect Theory Reader. Durham, NC: Duke University Press, pp. 52–71.

- Mazzei, Lisa A. (2014). Beyond an Easy Sense: A Diffractive Analysis. Qualitative Inquiry. 20(6), pp. 742– 746.

- MacLure, M. (2013). Researching without representation? Language and materiality in postqualitative methodology. International Journal of Qualitative Studies in Education, Vol. 26 No. 6 pp. 658-667.

- McDaniel Albritton, W. (2010). A multilevel model combining sensemaking and improvisation theories for IT and organizational change. Presented at the Hawaii International Conference on System Sciences (HICSS). pp. 1–10. doi:10.1109/HICSS.2010.24.

- Mele, C.; Russo Spena, T.; Peschiera, S. (2018). Value Creation and Cognitive Technologies: Opportunities and Challenges. Journal of Creating Value. 4(2), pp.182-195.

- Merleau-Ponty, M. (2012), Phenomenology of Perception, Routledge, London.

- Mesgari, M; Okoli, C. (2019). Critical review of organisation-technology sensemaking: towards technology materiality, discovery, and action. European Journal of Information Systems. 28(2), pp. 205–232.

- Michels, C. and Steyaert, C. (2017). By Accident and by Design: Composing Affective Atmospheres in an Urban Art Intervention. Organization, 24(1), pp. 79–104.

- Miettinen, R., Samra-Fredericks, D. and Yanow, D. (2009). Re-turn to Practice: An Introductory Essay, Organization Studies. 30(12), pp. 1309–27.

- Mishra, A. N.; Agarwal, R. (2009). Technological frames, organizational capabilities, and IT use: An empirical investigation of electronic procurement. Information Systems Research, 21(2), pp. 249–270.

- Mitev, N., and Howcroft, D. (2011). Post-Structuralism, Social Shaping of Technology, and Actor-Network Theory: What Can They Bring to IS Research? The Oxford Handbook of Management Information Systems. R. D. Galliers, and W. L. Currie (eds.), Oxford, UK: Oxford University Press, pp. 292-322.

- Mol, A. (2002). The Body Multiple: Ontology in Medical Practice. Durham & London, Duke University Press.

- Moriceau, J-L. (2016). Une Approche Affective de la Communication Organisationnelle. Revue française des sciences de l'information et de la communication, 9. DOI : 10.4000/rfsic.2478.

- Mumford, E. (1983). Designing Human Systems: For New Technology, Manchester, UK: Manchester Business School.

- Mumford, E. (2003). Redesigning Human Systems, Hershey, PA: Idea Publishing Group.

- Mumford, E. (2006). The Story of Socio-Technical Design: Reflections on its Successes, Failures and Potential. Information Systems Journal (16), pp. 317-342.

- Munster, A. (2001). Digitality: Approximate Aesthetics. CTheory, p. 28.

- Negri, A.; Hardt, M. (1999). Value and Affect. boundary 2. 26(2), pp.77-88.

- Nicolini, D. (2009). Zooming In and Out: Studying Practices by Switching Lenses and Trailing Connections. Organization Studies 30(12), pp. 1391-1418.

- Nicolini, D. (2009b). Articulating Practice through the Interview to the Double. Management Learning. 40(2), pp.195-212.

- Nicolini, D. (2009c). Zooming In and Out: Studying Practices by Switching Theoretical Lenses and Trailing Connections. Organization Studies. 30(12), pp.1391-1418.

- Nicolini, D. (2013). Practice Theory, Work, and Organization: An Introduction, New York: Oxford University Press.

- Niemimaa, Marko. (2016). Sociomateriality and Information Systems Research: Quantum Radicals and Cartesian Conservatives. The DATA BASE for Advances in Information Systems. 47(4), pp.1-15.

- O'Doherty, D. (2008). The Blur Sensation: Shadows of the Future. Organization. 15(4), pp. 535–561.

- Oberländer, A.M.; Röglinger, M.; Rosemann, M.; Kees, A. (2018). Conceptualizing business-to-thing interactions – A sociomaterial perspective on the Internet of Things. European Journal of Information Systems. 27(4), pp.486-502.

- Okamura, K., Fujimoto, M., Orlikowski, W. J., & Yates, J. (1995). Helping CSCW applications succeed: The role of mediators in the context of use. The Information Society 11(3). pp. 157–172.

- Orlikowski, W. J. (2010). The Sociomateriality of Organizational Life: Considering Technology in Management Research, Cambridge Journal of Economics. 34(1), pp. 125-141.

- Orlikowski, W. J., & Iacono, C. S. (2001). Research commentary: Desperately seeking the 'IT' in IT research—A call to theorizing the IT artifact. Information Systems Research, 12(2), pp. 121–134.

- Orlikowski, W.J. (2007). Sociomaterial Practices: Exploring Technology at Work. Organization Studies. 28(9), pp.1435-1448.

- Orlikowski, W.J.; Scott, S.V. (2008). Sociomateriality: Challenging the Separation of Technology, Work and Organization. The Academy of Management Annals. 2(1), pp.433-474.

- Orlikowski, W.J.; Scott, S.V. (2013). Knowledge eclipse: producing sociomaterial reconfigurations in the hospitality sector. In: Tsoukas, H.; Nicolini, D.; Carlisle, P. (Ed). How Matter Matters: Objects, Artifacts, and Materiality in Organization Studies. London: Oxford University Press. pp.119-141.

- Østerlie, T., Almklov, P. G., and Hepsø, V. (2012). Dual Materiality and Knowing in Petroleum Production. Information and Organization 22 (2), pp. 85-105.

- Parolin, L. L. (2022). A posthumanist approach to practice and knowledge. Ephemera, 22(2), pp. 129-138.

- Pickering, A. (1995). The Mangle of Practice: Time, Agency, and Science. Chicago, IL: University of Chicago Press.

- Prasad, P. (1993). Symbolic processes in the implementation of technological change: A symbolic interactionist study of work computerization. The Academy of Management Journal, 36(6), pp. 1400–1429.

- Probyn, E. (2000). Sporting Bodies: Dynamics of Shame and Pride. Body and Society. 6(1) pp. 13–28.

- Probyn, E. (2010). Writing Shame. In M. Gregg and G. Seigworth (eds). The Affect Theory Reader. Durham, NC: Duke University Press, pp. 71–92.

- Pullen, A. and Rhodes, C. (2015). Ethics, embodiment and organizations. Introduction to the special issue. Organization. 22(2) pp. 159– 165.

- Ramaswamy, V.; Ozcan, K. (2018). What is co-creation? An interactional creation framework and its implications for value creation. Journal of Business Research. 84(1), pp.196-205.

- Rautio, P. (2017). "A super wild story": Shared human-pigeon lives and the questions they beg. Qualitative Inquiry. 23(9), pp. 722-731.

- Reckwitz, A. (2002). The Status of the "Material" in Theories of Culture: From "Social Structure" to "Artefacts". Journal for the Theory of Social Behaviour. 32(2), pp.195-217.

- Reckwitz, A. (2016). Practices and their affects. Hui, S.; Shove, E.; Schatzki, T. (Ed). The Nexus of Practices. London: Routledge. pp.1-12.

- Reddy, S.K.; Reinartz, W. (2017). Digital transformation and value creation: sea change ahead. GfK Marketing Intelligence Review. 9(1), pp.10-17.

- Rhodes, C. ; Pullen, A. (2017). Critical Business Ethics: From Commercial Self-Interest to the Glorification of the Sovereign Pater. International Journal of Management Reviews, doi: 10.1111/ijmr.12142.

- Riemer, K., and Johnston, R. (2012). Place Making: A Phenomenological Theory of Technology Appropriation. In Proceedings of the 33rd International Conference on Information Systems, Orlando, Florida, December 16-19.

- Rivera, G.; Cox, A. (2014). An evaluation of the practice-based approach to understanding the adoption and use of information systems. Journal of Documentation. 70(5), pp.878-901.

- Rod, M.; Lindsay, V.; Ellis, N. (2014). Managerial perceptions of service-infused IORs in China & India: A discursive view of value co-creation. Industrial Marketing Management, 43(4), pp. 603–612.

- Rusanen, H., Halinen, A., & Jaakkola, E. (2014). Accessing resources for service innovation— The critical role of network relationships. Journal of Service Management, 25(1), 2–29.

- Russo Spena, T.; Mele, C.; Marzullo, M. (2018). Practicing Value Innovation through Artificial Intelligence: the IBM Watson case. Journal of Creating Value. 5(1), pp.11-24.

- Saha, V.; Goyal, P.; Jebarajakirthy, C. (2022). Value co-creation: a review of literature and future research agenda. Journal of Business & Industrial Marketing. 37(3), pp. 612–628.

- Sandberg J., Tsoukas H. (2011). Grasping the logic of practice: theorizing through practical rationality. Academy of Management Review. 36(2), pp. 338–360.

- Sandberg, J.; Tsoukas, H. (2015). Making sense of the sensemaking perspective: Its constituents, limitations, and opportunities for further development. Journal of Organizational Behavior. 36(1), pp.6-32.

- Sandberg, J.; Tsoukas, H. (2020). Sensemaking Reconsidered: Towards a broader understanding through phenomenology. Organization Theory. 1(1), pp.1-34.

- Santuber, J.; Dremel, C.; Owoyele, B.; Edelman J.A. (2020). Building an Apparatus: Disclosing Affectivity in Sociomaterial Research. Forty-First International Conference on Information Systems, India. 1(1), pp.1-17.

- Sassen, S. (2006). Territory, Authority, Rights: From Medieval to Global Assemblages. Princeton, NJ: Princeton University Press.

- Schatzki, T. R. (1996). Social Practices: A Wittgensteinian Approach to Human Activity and the Social. Cambridge, UK: Cambridge University Press.

- Schatzki, T. R. (2002). The Site of the Social: A Philosophical Exploration of the Constitution of Social Life and Change. University Park, PA: Pennsylvania State University Press.

- Schatzki, T. R. (2005). The Site of Organizations. Organization Studies. (26), pp. 465-484.

- Sedgwick, E. K. (2003). Touching Feeling: Affect, Pedagogy, Performativity. Durham, NC: Duke University Press.

- Sedgwick, E. K. and Frank, A. (1995). 'Shame in the Cybernetic Fold: Reading Silvan Tomkins', in E. K. Sedgwick and A. Frank (eds). Shame and Its Sisters: A Silvan Tomkins Reader, pp. 1–28. Durham, NC: Duke University Press.

- Seigworth, G. and Gregg, M. (2010). An Inventory of Shimmers, in M. Gregg and G. J. Seigworth (eds). The Affect Theory Reader. London: Duke University Press, pp. 1–28.

- Siino, R. M.; Hinds, P. J. (2005). Robots, gender sensemaking: Sex segregation #8217;s impact on workers making sense of a mobile autonomous robot. In Proceedings of the 2005 IEEE international conference on robotics and automation, pp. 2773–2778. ICRA. doi:10.1109/ROBOT.2005.1570533

- Stern, Daniel (2010). The issue of vitality. 19 (2), pp. 88-102, DOI:10.1080/08098131.2010.497634

- Stewart, K. (2007). Ordinary Affects. Durham & London: Duke University Press.

- Stewart, K. (2010). Worlding Refrains. In M. Gregg and G. J. Seigworth (eds). The Affect Theory Reader. London: Duke University Press, pp. 339–355.

- Stewart, K. (2011). Atmospheric Attunements. Environment and Planning D: Society and Space. 29(1), pp.445-453.

- Storbacka, K.; Nenonen, S. (2011). Scripting markets: From value propositions to market propositions. Industrial Marketing Management. 40(2), 255–266.

- Strati, A. (2009). Do you do beautiful things? Aesthetics and Art in Qualitative Methods of Organization Studies. In D. Buchanan & A. Bryman (Eds.), The Sage Handbook of Organizational Research Methods, London. Sage Publications, pp.230-245.

- Suchman L. (1994). Working relations of technology production and use. Computer-supported Cooperative Work. 2(1–2), pp. 21–39.

- Taguchi, H. L. (2012). A diffractive and Deleuzian approach to analysing interview data. Feminist Theory. 13(3), pp. 265–281.

- Tarde, G. (1902). Psychologie économique. Paris. Félix Alcan.

- Taylor, C. (1991). The Ethics of Authenticity. Cambridge, MA: Harvard University Press.

- Thanem, T., Wallenberg, L. (2015). What Can Bodies Do? Reading Spinoza for an Affective Ethics of Organizational Life. Organization 22(2), pp. 235–250.

- Thrift, N. (2004). Intensities of feeling: towards a spatial politics of affect. Geografiska Annaler Series B Human Geography. 86(1), pp. 57-78.

- Thrift, N. (2005). Knowing Capitalism. London: Sage.

- Thrift, N. (2007). Non-representational Theory: Space, Politics, Affect, New York, Routledge.

- Thrift, N. (2008). Non-Representational Theory. London: Routledge.

- Thrift, N. (2012). The Insubstantial Pageant: Producing an Untoward Land. Cultural Geographies 19(2), pp. 141–68.

- Trainor, L. R.; Bundon, A. (2021). Developing the craft: reflexive accounts of doing reflexive thematic analysis. Qualitative Research in Sport, Exercise and Health. 13(5), pp.705-726.

- Trist, E., and Bamforth, W. (1951). Some Social and Psychological Consequences of the Long Wall Method of Coal-Getting. Human Relations. 4(1), pp. 3-38.

- Vaara, E.; Whittington, R. (2012). Strategy-as-practice: Taking social practices seriously. The Academy of Management Annals. 6(1), pp. 285–336.

- Vaast, E. (2007). Danger is in the eye of the beholders: Social representations of information systems security in healthcare. The Journal of Strategic Information Systems. 16(2), pp. 130–152.

- Van den Brink, M., Pullen, A. and Fotaki, M. (2016). Sub-theme 04: (SWG) Diversity, Embodiment and Affect. EGOS Conference, Naples, July 2016.

- Vargo, S.L.; Luch, R.F. (2006). Service-Dominant Logic What It Is, What It Is Not, What It Might Be. In: Vargo, L.V.; Lusch, R.F. (Ed). The Service-Dominant Logic of Marketing Dialog, Debate, and Directions. New York: Taylor & Francis Group. pp.43-56.

- Vargo, S. L.; Lusch, R. F. (2008). Service-dominant logic: Continuing the evolution. Journal of the Academy of Marketing Science. 36(1), pp. 1−10.

- Vargo, S.L.; Lusch, R.F. (2011). It's all B2B…and beyond: Toward a systems perspective of the market. Industrial Marketing Management. 40(1), pp.181-187.

- Vargo, S.L.; Maglio, P.P.; Akaka, M.A. (2008). On value and value co-creation: A service systems and service logic perspective. European Management Journal. 26(3), pp.145-152.

- Vargo, S. L.; Lusch, R. F. (2016). Institutions and axioms: An extension and update of service-dominant logic. Journal of the Academy of Marketing Science, 44(1), pp. 5–23.

- Visser, L.M.; Davies, O.E. (2021). The Becoming of Online Healthcare through Entangled Power and Performativity: A posthumanist agential realist perspective. Organization Studies. 42(12), pp.1817-1837.

- Wagner, E. L., Newell, S. M., and Moll, J. (2011). Accounting Logics, Reconfiguration of ERP Systems & the Emergence of New Accounting Practices: A Sociomaterial Perspective. Management Accounting Research. 22(1), pp. 181-197.

- Weick, K. E. (1990). Technology as equivoque: Sensemaking in new technologies. In P. S. Goodman, & L. S. Sproull (Eds.), Technology and organizations, The Jossey-Bass management series. San Francisco, CA: Jossey-Bass, pp. 1–44.

- Weick, K. E. (1995). Sensemaking in Organizations (3). Sage Publications, Incorporated. Retrieved from http://books.google.ca/books?hl=en&id=nz1RT-xskeoC&oi=fnd&pg=PR7&dq=sensemaking+in+organizations&ots=zF2nzbgr8l&sig=tlc1tqP_fEmtEhUbO_1FJPovP24

- Weick, K. E. (2000). Making sense of the organization (1). Hoboken, NJ: Wiley-Blackwell.

- Whiteman, G., & Cooper, W. H. (2011). Ecological sensemaking. Academy of Management Journal, 54(5), pp. 889–911.

- Whittington, R. (2006). Completing the Practice Turn in Strategy Research. Organization Studies 27 (5),

  pp. 613-634.

- Willink, Kate G.; Shukri, Salma T. (2018). Performative interviewing: affective attunement and reflective affective analysis in interviewing. Text and Performance Quarterly. 38(4), pp.187-207.

- Wood, M., Brown, S. (2011). Lines of Flight: Everyday Resistance along England's Backbone. Organization, 18(4), pp. 517–39.

- Yakhlef, A.; Essén, A. (2013). Practice innovation as bodily skills: the example of elderly home care service delivery. Organization. 20(6), pp.881-903.