The Mechanisms of Agile Management

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Introduction

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1 Introduction

This book is about the mechanisms of agile management and their effects on work processes in the context of industrial tech development. It provides an empirical study of the underlying mechanisms that control and regulate employees' daily work lives along agile principles. Agile management is an emblematic example for current management approaches in many contemporary organizations. It represents a systematized practice supposed to render work practices more adaptable, collaborative and less hierarchical. Although (industrial) companies are increasingly starting to apply agile management, we still know very little about the methodology's underlying mechanisms. This study is therefore concerned with the ways in which the different expectations and visions translate and manifest into controlling and regulatory devices, practices and interactions, shaping the work process. Instead of examining the feasibility or outcomes of agile management once these approaches are implemented, I critically investigate the dynamics of how these approaches emerge and manifest in workplaces in the first place. I take up and challenge commonly held beliefs and ideas toward adaptability, self-organized teamwork and flattened hierarchies and show how they unfold in an ambivalent manner ranging between improvisation and planning, accuracy and imperfection, intimacy and distance, exploitation and care or autonomy and control. This book thus provides novel insights into the tensions and ambivalences of agility being made compatible with each other to align with corporate objectives, turning employees into calculable, committed and yet dis/empowered, ranked subjects.

I argue that the implementation of agile methodologies is contingent on the socio-material relationships structuring the workplace and, as managing entities, they control work practices. By proposing a conceptual framework on what I term *management scripts*, I illuminate the dynamics and underlying patterns with which work processes are regulated by humans and nonhumans. I claim that agile methodologies and their involved routines, tools and expected roles are based on scripts or 'recipes' determining how agile management should look like. These scripts are embedded in the different human

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and nonhuman elements of workplaces that, through their inscribed programs of action, guide and direct the work process. Through this lens on management scripts, we can see the heterogeneous socio-material relationships being orchestrated and arranged to regulate the work process rather than focusing solely on the human realms of leadership style or social interests. Using such a perspective of managerial control distributed more symmetrically offers new perspectives on how management functions in practice. It allows us to consider managerial control being enacted through every day, socio-material practices, rather than just formal policies, procedures or assigned authorized persons. It also shifts our focus more directly to the contribution of mundane material objects in controlling work. This book therefore highlights that the implementation of agile methodologies is an emergent, socio-material and scripted practice.

1.1 Situating Agile Management: A New World of Work and Management?

The starting point of this book is the observation that the traditional paradigms of work and management are currently fundamentally transforming. Organizations are said to adopt more flexible, lean and agile models to the field of management and introduce new digital technologies into the workplace. The debate on this shift is centered around three core issues, namely, adaptability, collaboration and flattened hierarchies. First, companies are expected to establish more flexible development processes to respond to rapid changes in customer demands more quickly. The turn toward adaptable organizations is often considered to replace former bureaucratic work coordination with higher responsiveness to change (Tihlarik and Sauer 2021). In this context, advances in automation, digital project tools or artificial intelligence fuel these discussions, as their application is expected to drastically impact on the speed of production processes, forcing organizations to acquire more adaptable solutions. Especially traditional companies in the industrial sector of technology are struggling with this dynamic and the current pace of the software industry. This challenge is often explained by the fact that software products and services are faster to develop and more flexible to reconfigure (e.g. Fuchs et al. 2019).

Second, discussions about the growth and institutional expansion of (tech) companies revolve around the increased relevance of teamwork. Collaborations between and among people involved in a development process of a product should facilitate higher transparency because former tech development often isolated the different development stages from each other. Working as a team across functions and internal structures should allow both managers and employees to better see the bigger picture of a project or product (Grass et al. 2020). As a response, new (digital) tools for project planning are introduced to guarantee a more transparent collaborative workflow. Thus, to still be able to make decisions, organizations are increasingly

compelled to implement teamwork often characterized by cross-functional and interdisciplinary constellations and new project planning devices.

Third, flat hierarchies have become a key issue in the current management discourse, advocated by consultancies and authors of management handbooks that believe in a necessary shift toward flattening organizational structures (Robertson 2015; Kleinman et al. 2018). The model of a management with a strict superior-subordinate relationship is said to be increasingly outdated and inefficient. Companies are challenged to replace the former order of top-down managerial control with a more symmetrical distribution of (self-) management among their employees (Hoda et al. 2013). Employees are expected to take on responsibility for their own work coordination and the organization's performance, becoming "quasi-managers" (Gruhlich and Kalff 2021, 139) and entrepreneurs themselves.

Against this background, agile management has become a leading example of how these debates concretize into a particular management approach.[1] Scholars regard this phenomenon as representing "the management paradigm for organizations in the 21st century" (Olbert and Prodoehl 2019, 12; my translation) and even predict the rise of an "agile capitalism" (Daum 2020). Pfeiffer et al. (2021) underline that agile management has become an "imperative", influencing other companies to also transform into agile organizations. Once a niche approach within software development,[2] agile methodologies now find themselves deeply embedded in various sectors such as manufacturing, logistics and even administration, insurance and finance, becoming a hallmark of contemporary capitalist rationales (e.g. Boes et al. 2016). Especially the *Agile Manifesto for Software Development* (Beck et al. 2001), written by a group of software developers in North America in the early 2000s, has paved the way for a new era of more flexible (project) management practices. The Manifesto stressed the importance of personal collaborations, customer feedback and efficiency being prioritized over bureaucracy or strictly following documentation. Nowadays, companies, employees, entrepreneurs – and even state actors and governments – thus strive to be more agile because they believe in rendering organizations more adaptable to current user demands and in improving workplace efficiency and working conditions when introducing flat hierarchies. As the sociologists Tihlarik and Sauer underline, agile methodologies offer "a more labor-process-oriented, more cooperation-oriented, and less planning-oriented and documentation-oriented form of management" (2021, 5). Trade unions furthermore emphasize the advantages for employees such as "more self-determination, less stress, less pointless work, a quick sense of achievement and continuous, direct customer feedback" (Barth 2021; my translation). And management handbooks even predict an end to management at all when emphasizing that "there are no more managers" (Robertson 2015, 39). The claim to have less or even no management at all is, in this context, the most extraordinary difference from former management approaches

since it suggests no longer a 'manager' in the form of a single designated person who defines work tasks or is solely responsible for the product's functionality.

However, these shifts in current management approaches are not merely about improving efficiency, increased flexibility, productivity or work satisfaction; they also represent attempts to legitimize the relentless pursuit of capitalist objectives. Following Boltanski and Chiapello (2007), the principles of adaptability, collaboration or flattened hierarchies can be regarded as the result of the recuperation of emancipatory critique by capitalist rationales. They argue that increasing demands from critical social movements (e.g. they refer to the artistic and social critique from the 1970s) have become incorporated by managerial techniques to render potential critique compatible with (new) forms of work control and domination. In seeking to understand how capitalism maintains its legitimization and acceptance in society, Boltanski and Chiapello describe a 'new spirit of capitalism'. Such a spirit characterizes the beliefs in capitalist rationales, by which potential critique or resistance could be disarmed or even re-integrated into new economic and workplace dynamics. This tendency puts commonly held beliefs in flattened hierarchies and increased worker autonomy to the test as they still risk becoming somehow appropriated by attempts to control and legitimize prevailing power asymmetries in the workplace (see also Wenten 2019; Seitz 2019; Hodgson and Briand 2013). These developments hence suggest a drastic shift in the relationship between management methodologies and work control, leaving us with a picture of contemporary workplaces alternating between capitalist control rationales and more fluid, subtle governing strategies.

1.2 Why Studying the Mechanisms of Agile Management?

While agile approaches have so far been studied in terms of their practical applications, feasibility, benefits and negative effects for working conditions (e.g. Attar and Abdul-Kareem 2020; Carvalho et al. 2019; Prange and Heracleous 2019; Shim and Lee 2019), there is a relative paucity of research that delves into the emergence, manifestation and inner workings of their regulative mechanisms in the first place. Studies concerned with the feasibility of agile management often still have a "universal understanding", as Pfeiffer et al. argue, which lacks a "social science perspective [that] contextualizes the application of agile work more consistently" (2021, 3). Chiapello and Gilbert add to this that a social sciences perspective, more generally, "allow[s] us to avoid a strictly rational consideration of management actions and to re-embed them within social relationships and structures" (2019, 25). Management actions should be better explained in relation to "social representations, value systems, rules of the game, and power relations" (2019, 25). Against this background, I claim that the mechanisms of agile management warrant critical examination, especially as they risk reshaping power relations within the capitalist landscape of modern workplaces.

However, I argue that those studies being concerned with the mechanisms of management lack a closer analysis of agile methodologies and require attention to the role of nonhuman actors. They are moreover often based on readymade, a priori assumptions that make it difficult to fully explore the underlying dynamics stabilizing and maintaining the origin of such assumptions in the first place.

In this regard, there are three core research strands that I subsume under the overarching themes of subjectification, the labor process and sociomateriality[3] studying management mechanisms (for a more detailed overview, see Chapter 2). The first, labor process theory, has been interested in understanding the conditions for managerial control, arguing that capitalist rationales, class conflicts and social interests shape the ways how employees navigate through their daily work lives. Control is often understood as the "way managers can align employees' capabilities with the organization's goals" (Raelin 2011, 126; see also Cyert and March 1963; Perrow 1970; Thompson 1967). It is discussed in relation to scopes of employee autonomy[4] (Sewell and Barker 2006). Seen from this perspective, the mechanisms of regulating work range from bureaucratic to neo-normative control, soft and hard power mechanisms, top-down and bottom-up work organization, all of which governing and regulating workers and, for instance their daily tasks, subjectivities, attitudes and the required skills (Morris et al. 2016; Crowley et al. 2014; Costas 2012; Drewlani and Seibt 2018; van Baarle et al. 2021). Even though this research perspective offers fruitful insights into the paradox of workers autonomy and control, the underlying management mechanisms of agility more specifically are still underexplored in this research strand.

In contrast to labor process theory, research on subjectification processes focuses on the internalization of management practices and responsibility to the individual, as a result of which employees are expected to self-control and govern their own work, often even their own financial security (Bröckling 2016; Pongratz and Voß 2003; Kalff 2018; Wynn et al. 2019). Seen from this perspective, employees internalize corporate strategies and (implicitly or explicitly) subordinate their attitudes and work tasks to broader organizational objectives. Decentralized approaches of teamwork, self-organization or organizational cultures are regarded as obscured forms of control and self-discipline or the incorporation of corporate norms and values into employees' work attitudes (Knights and Willmott 1987; Costea et al. 2008; Raelin 2011). In this regard, agile methodologies are understood as a new way of formalizing collaborative work relations, by which team pressure and collective control are the guiding principles of regulating work (de Laat 2023; Hodgson and Briand 2013; Wright 2017).

However, I argue that these two research strands usually have a conceptual underpinning which assumes that pre-existent categories can explain how the regulatory power of management methodologies emerges, manifests and functions. These categories can be associated with, for example, "social class" (Moore 2018), "economic development" or "marketisation" (Fleming

and Sturdy 2009), "organizational positions" (Hodgson and Briand 2013) or "neoliberalism" (Bröckling 2016). And although these explanations, based on a priori postulates, are important for making sense of the mechanisms of management methodologies, they risk accepting too quickly the surface appearance as a whole. In an analysis of agile management, Coban and I problematize that such an approach is often perceived as "a tool that can be universally integrated and applied to different workplaces" (2021, 58). Nevertheless, such a take on the mechanisms of management risks restating assumptions, without explaining how these mechanisms really emerge, manifest and function in the first place.

The third research strand on sociomateriality, in contrast, seeks to eschew a priori assumptions by providing a relational and symmetrical framework for studying management practices (Leonardi 2013; Orlikowski and Scott 2008; Orlikowski 2010). Scholars in the fields of Science and Technology Studies (STS) and organization studies seek to capture the complexity of modern workplaces, where social and material elements are deeply intertwined and offer novel insights into how these elements co-evolve to shape work practices and enact managerial techniques. Instead of assuming fixed roles or properties for humans, organizational structures or material objects, this perspective has thus convincingly shown that their roles and properties emerge and evolve through ongoing sociomaterial interactions (e.g. Gherardi and Laasch 2021). More crucially, while the research strands on the labor process and subjectification mainly treat managerial control as an outcome of social interests, conflicts or self-discipline, sociomaterialist approaches have begun to integrate nonhuman actors more symmetrically into the analysis. Accordingly, managerial control is not a social practice that is solely exercised by humans directing tasks or internalizing corporate rationales. As we will see later in Chapter 2, both human and nonhuman actors act as managing entities. In this regard, studies have shown how material elements of coworking spaces such as shared desks or the spatial layout shape the ways how employees organize their workdays and communicate with each other (Bouncken et al. 2021; Jeyasingham 2020; see also Chapter 4). In applying a sociomaterialist perspective, Wajcman and Rose (2011) equally demonstrate that organizations and the involved practices of work control come into being out of multiple and dynamic sociomaterial relationships. This perspective is particularly valuable for scrutinizing agile workplaces where flexibility and adaptability are key. It also brings to light how power dynamics and managerial control are embedded in the material realm of workplaces.

Referring to these three research perspectives, I argue that current research on management and work control requires a more symmetrical and relational foundation considering both human and nonhuman actors. This book is an invitation to treat agile management and its underlying mechanisms in such a way, namely as emerging out of a complex interplay of different humans and nonhumans that – only in their entanglement – make its dynamics and functionality possible. I thus investigate the mechanisms that agile management

entails instead of analyzing what agile management requires and causes once it is established. Central to this study are consequently the following questions: *How and by what means are ideas of agile management put into practice? How is work coordinated by human and nonhuman actors? And what are the underlying mechanisms of agile management?* Unlike those studies examining the discourses of management or individuals such as managers or employees alone, I engage with the micro level of agile management and add a more symmetrical, relational understanding of the mechanisms of agile management to the analysis. In this regard, I contribute to the three research perspectives when addressing the role of human actors and their positions of power, while, *at the same time*, considering agile management as the result of close entanglements between humans and nonhumans. This book thus embarks on an exploration of the underlying management mechanisms, asking how the shifts play out in practice and how work processes get, then, regulated. It delves into the transformative impacts and the intricate ways with which these mechanisms reconfigure the fabric of workplace (power) dynamics.

1.3 The Conceptual Lens on Management Scripts

To understand how agile management is implemented in organizations, I propose a framework on what I term *'management scripts'* enabling the regulation of work practices beyond solely human action and communication processes. Throughout the chapters, I illustrate that management methodologies are based on expectations, visions and values that are inscribed into and become enacted by a complex set of human and nonhuman entities such as work artifacts, routines, work attitudes, organizational positions and roles or even mundane elements such as the workplace's furniture or sticky notes. These elements embed scripts – understood as programs of action or recipes of how the regulation of work or performance of a specific role should look like – that infrastructure managerial activities without professional managers always being present. In this regard, theoretical considerations on scripts posit that individuals and teams follow predetermined sequences of actions, akin to scripts, in their daily work routines (Barley and Tolbert 1977; Boxenbaum and Rouleau 2011; Krausz 1993). These scripts not only are institutionalized norms, prescriptions of distributing roles and responsibilities or communication patterns and routines but also perform through technical objects (Akrich 1992). These scripts eventually have an impact on the actors' actions and regulate and coordinate the work process. As we shall see throughout this book, scripts equally play out in the physical properties of artifacts – that is, the affordances – and their capacities for offering a set of actions (Gibson 1979/2015; Hutchby 2001). Management scripts thereby manifest power asymmetries because they attribute some actors with power while preventing others from exerting influence.

A perspective on management scripts thus offers a detailed, less 'human-centered' and more relational framework for understanding how work processes are regulated. It provides insights into how individuals and teams navigate their roles, tasks and interactions by revealing the role that materiality plays in co-directing human action. It likewise elucidates the underlying processes that drive organizational effectiveness or economic interests. Such an approach enables us to see how people adhere to but also challenge scripts, shaping and reshaping them and, thus, responding to instructions to work in a specific manner. With a focus on management scripts, we can detect the often-invisible, routine actions that humans perform, which are crucial for making the functioning of agile management practices possible in the first place. Hence, this lens reveals how scripts contribute to the stability and coherence of corporate practices and managerial control amidst change and flattened hierarchies (or even the 'end of management' at all, see further above). Scripts also reveal how certain behaviors, norms, roles or the use of artifacts or work facilities are prescribed and negotiated, shedding light on who has the authority to alter or enforce these scripts. This understanding is valuable for the examination of agile management, where empowerment, flat hierarchies and distributed decision-making are promised to dominate. A lens on management scripts also allows us to attend more directly to the contributions and affordances of artifacts (such as sticky notes or comfortable furniture) playing an equal role in the design and regulation of agile work environments. It finally shows how managerial control and power relations do not only emerge from a specific group of interests in aligning company's interests with employee's practices. Instead, the perspective on management scripts enables us to see the complex entanglement of different interests, visions and narratives with humans, nonhumans and their orchestration into specific directions and implicit or explicit guidelines for action. Such an understanding thus provides refined insights into the dynamic and contextual nature of work control, moving beyond the assumption of static models to understand how control over the labor process is practically and socio-materially exercised and sustained.

1.4 A Short Overview of Agile Methodologies

Even though agile management has gained great attention over the past decades, its methodological approaches vary and are often utilized in a rather fuzzy way. Many studies have already discussed the differences between them but scholars such as Iivari and Iivari (2011) conclude that agility is an ambiguous approach that always unfolds differently. This ambiguity becomes apparent in the large array of approaches framed as agile, ranging from Design Thinking, Rapid Prototyping over Extreme Programming to Scrum or Kanban. In this context, Scrum is arguably one of the most widespread and applied methodologies in (industrial) organizations (Marchenko and

Abrahamsson 2008; Pfeiffer et al. 2021) matching the principles of adaptability, collaboration and flat hierarchies. Although there are different understandings of agility, most of them are still informed by a similar set of roles, practices and artifacts. Organizations often even combine several methodologies at the same time. I describe in the following the shared elements of the diverse methodologies.

Agile approaches imply the reformation of former hierarchical structures by introducing new roles such as Product Owner, Scrum Master, Service Request Manager, Service Delivery Manager, Development Team, Customers or Lead Users. These should enable a more equal distribution of responsibilities, less direct individual control and the integration of potential customers. The following analysis mainly refers to the roles of Product Owners, Scrum Masters and Development Teams as these three roles were all represented in the firms under scrutiny.[5] Product Owners, Service Request Managers and Service Delivery Managers are in charge of the product's or service's functionality. They are usually in touch with (external) stakeholders such as suppliers, marketing branches, consultancies, potential customers, sales departments and internal executives. Because of their close connection to external interest groups, Product Owners/Service Request Managers define work packages and develop priority lists indicating which work package should be implemented next. The Scrum Master is a role peculiar to the Scrum framework who mediates between the Development Team and the Product Owner to ensure a smooth workflow during the development process. The Scrum Master's tasks are often characterized by "leadership" (Schwaber 2004, 1) or moderation activities and they often take care of the general work climate and a respectful collaboration. They are responsible for the progress of the team, the internal communication and they make sure that all tasks are accomplished on time. The Development Team is a group of individuals supposed to work through the work packages toward the finalization of a product. They are expected to estimate their time and work effort independently from any supervisor. They work closely together when gathering at regular events or meetings such as the 'Daily', 'Review' or 'Retrospective', all having different objectives (see Figure 1.1).

The different meetings usually happen on a regular basis to increase productivity and maintain a structured and continuous workflow. The Daily, as its name suggests, is a meeting which usually takes place for 15–45 minutes at the start of each day, attended by the entire Development Team. During these meetings, team members update each other on the tasks currently being worked on. The Review and Retrospective happen on a less frequent basis, still serving as group meetings for updates about the progress and current state of the project. Reviews are usually recommended at the end of every Sprint and should last no longer than four hours. They concentrate on discussing the work tasks of the past weeks, what has been done, which

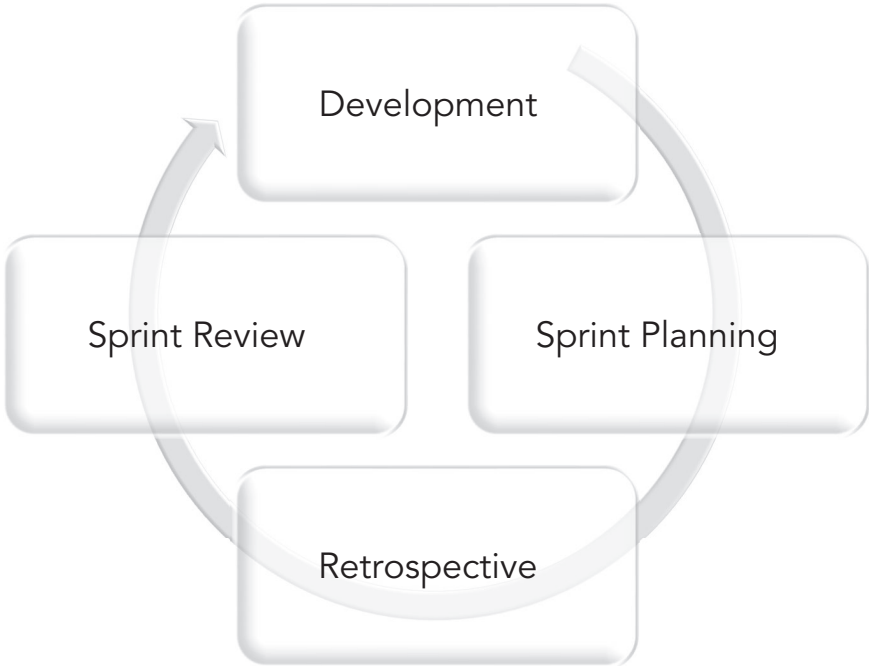

Figure 1.1 Example of a Sprint involving the different phases of Sprint Planning, Retrospective and Review. Illustration by the author, based on Sutherland et al. (2019).

tasks are still in progress and integrating external feedback of customers into the development phases. Unlike the Review, the Retrospective focuses more on internal reflections about work activities that have been successful or unsuccessful. Retrospectives ideally result in Learnings and Best Practices to be used by the team so that the project proceeds productively. Many agile approaches are structured in various phases called 'Sprints', each lasting for about four to six weeks. These Sprints are performed by the entire team with the aim of generating, testing, reviewing and, where necessary, reworking an idea. With each Sprint, the team is gradually approaching the final product by developing a deliverable element of the product.

Objects such as whiteboards or sticky notes (whether in analogue or digital form) play a vital role in agile management as they are said to be core tools in brainstorming, organizing, categorizing and evaluating. During the different meetings, the Development Team, Scrum Master and Product Owners come together and decide which product elements (also called Product Backlog Items (PBIs)) should be created during each Sprint. The PBIs are manifested on sticky notes or moderation cards and transferred to the Product Backlog or Scrum Board (see Figures 1.2 and 1.3).

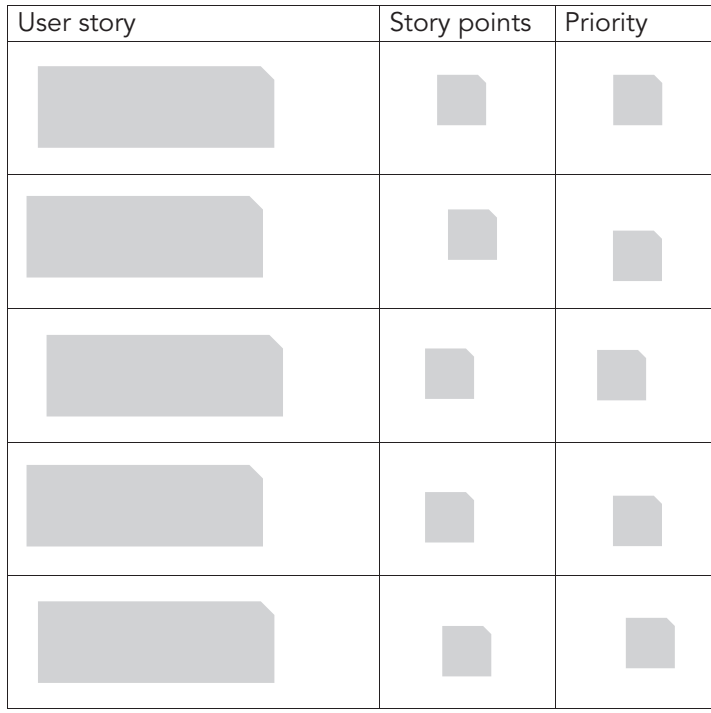

Figure 1.2 The Product Backlog arranges the different stages in the development process of a product. It varies between a table filled with tasks written on sticky notes and more detailed lists indicating a user story, its priority and urgency. Illustration by the author.

The notes contain all the different steps and tasks needed to develop and improve an initially rough idea (the vision) that should, at some point, end in a marketable product. Other approaches such as the Extreme Programming method or Rapid Prototyping use the concept of 'user stories' emerging from PBIs that should represent customers' values and requirements. Usually, these stories are described by one or two sentences indicating the user group, the requirement and the final output of the product or service. The Scrum Board is thereby only used internally, while user stories and the Product Backlog are artifacts connecting the customers.

As we shall see in the following chapters, objects such as Scrum Boards or Backlogs, moderation cards, digital screens, pens, computer mice, keyboards and sticky notes play a vital role in mediating and supporting the interactions on a collaborative level and regulating work practices more generally. In close connection with humans, they make up the socio-material preconditions for agile workplaces.

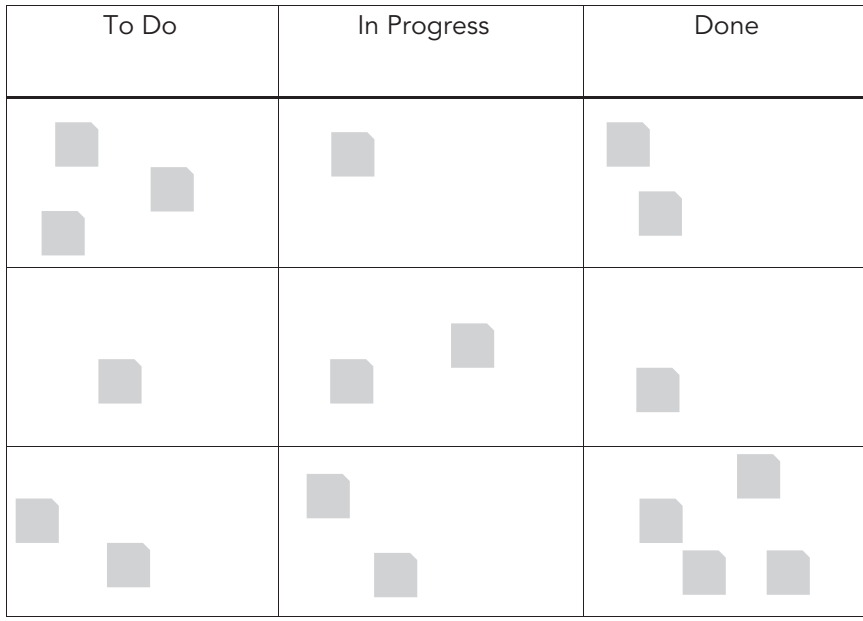

Figure 1.3 Example of a Scrum Board. Illustration by the author.

1.5 Outline of This Book

This book tells a different story about the current world of agile work and management. Existing literature tends to focus on business issues, the effects and outcomes of agile methodologies (e.g. on efficiency gains, leadership styles or project success rates), without sufficiently addressing the complex socio-material dynamics at play. This book therefore addresses a gap in the current literature across the sociology of work, organization and management studies and STS. It highlights more in detail the underlying mechanisms of agile management by studying the interactions between individuals, teams, artifacts, expectations, values and organizational structures in contexts of agile tech development.

In Chapter 2, I present the theoretical foundations for this study and argue for the necessity of the concept of the script (e.g. Akrich 1992; Akrich and Latour 1992; Laudel 2019; Igelsböck and Schüßler 2019) to thoroughly investigate the mechanisms of agile management. I refer to the three aforementioned research strands characterized as theories focusing on the labor process, subjectification and socio-materiality. These strands inspire for attending to the close interactions between human and nonhuman actors, leading me to suggest a framework on what I term *management scripts*. This chapter thus presents the basis of my ontological and epistemological views on management and work practices being embedded in and emerging out of

socio-material assemblages. I explain why studying management mechanisms requires attention to the expectations and visions of managerial techniques, their manifestation in routines, habits, roles or artifacts, the affordances of objects and their consequences for workplace power dynamics. The concept of management scripts allows us to examine the social relations, values and expectations in the workplace, while recognizing the influence of physical properties of objects and their regulatory power. I identify four core characteristics of management scripts that are key to understanding the relationship between management methodologies, their inner workings and their adoption in the workplace. I define management scripts as (1) programs of action with (2) affordances that can be (3) reconfigured and that represent and manifest (4) power relations. These scripts provide new insights into the often-invisible expectations and visions for coordinating and controlling work processes.

The third chapter details the research methods, data materials and analytical framework that I argue are valuable and necessary to fully explore and examine management scripts. I conducted research methods of in-depth interviews, ethnographic fieldwork and analysis of artifacts and documents. This chapter introduces a model for analyzing management mechanisms based on an adapted script analysis (Akrich 1992) for research on management mechanisms and their effects on work processes. In agile settings, identifying the origins of scripts can be difficult. Therefore, I perform a 'reverse study', examining scripts in action and then tracing them back to the underlying expectations, visions and concepts of work control within the agile framework. Thus, I argue that it is essential to examine the underlying scripts of management methodologies also in their practical applications. Rather than starting with analyzing the initial creation of action programs and ending it with a focus on their modifications, this study links these stages more directly together.

The analyses in Chapters 4–6 reveal three central mechanisms of agile management. Structured along the ideas of adaptability, collaboration and flat hierarchies of agile management, I present the mechanisms of what I term *scripted improvisation*, *scripted intimacy* and *scripted ranking* that guide and coordinate the employees during their daily work lives. I thereby shed light on the tensions and ambivalences deeply manifested in agile management that appear to be made compatible with each other. In essence, the chapters set the stage for a detailed exploration of how agile management is a carefully engineered system that orchestrates both human and nonhuman components to meet specific (corporate) objectives, all while navigating tensions between, for example, flexibility, autonomy, control, pragmatism or emotionality. It is this dynamic of tensions and the close socio-material interactions that keep managerial control still prevalent, even without a designated manager and the emergence of flexibility and constant change.

Chapter 4 is dedicated to the promise of adaptability and discusses how it establishes a mechanism of *scripted improvisation*. Agile methodologies

entail visions of fast and adaptable development processes on the one hand and constant improvement through the expectation of failing on the other. This dynamic of an ethos of 'quick and dirty' illuminates how even impromptu, improvised actions, usually perceived as the counterparts to scripts, paradoxically, turn into regulating and controlling elements. The analysis of management scripts highlights that adaptability is still grounded in strict mechanisms whereby improvisation is now one of the key objectives. Thus, this chapter underlines that improvisation is not only an ad hoc, spontaneous practice without prior planning but can itself turn into a management mechanism. This script of improvisation prescribes a specific mode of working, pushing employees to act spontaneously, reflexively and imperfectly. The analysis finally uncovers the intricacies of this unique dynamic and its impacts on work processes within industrial tech companies. It demonstrates how physical but also intellectual tasks, such as decision-making and problem-solving, are guided by different scripts embedded in human and nonhuman elements and therefore somehow mechanize employees' actions. I argue that this mechanization of intellectual and physical labor lastly transforms employees into predictable and calculable entities that should make it possible to maintain control over their work, even in times of growing flexibility, autonomy and flattened hierarchies.

In Chapter 5, the focus is on the promise of collaboration to transform contemporary agile workplaces. I argue that, traditionally seen to boost efficiency, innovation and creativity, collaboration now takes on a deeper dimension, enforcing intimate working relationships founded on appreciation, care, mutual support and trust. This shift is explored through practices such as feedback procedures, attentive body language, caretaking skills and collective problem-solving, which integrate elements previously associated with private personal relationships into the professional sphere of work. As the second management mechanism of *scripted intimacy*, I illustrate that emotional feedback procedures, practices of caretaking and processes of collective problem-solving have inscribed the expectation of forming intimacy among employees. These expectations are embedded in new routines, artifacts and organizational roles translating collaborative principles into the socio-material landscape of agile workplaces. The analysis thereby unpacks the involved scripts of establishing close, emotional bonds that eventually direct employees to engage more intimately with their workplace. In this context, material objects like sticky notes and whiteboards play a crucial role, not only facilitating collaboration but also creating a sense of security and emotional support. I show that these artifacts – beyond their practical use for brainstorming or memorizing – influence emotional connections and interpersonal relationships among team members, contributing to a supportive work atmosphere. I contend that collaboration based on care and intimate connections emerges, quite paradoxically, out of the objectification and de-emotionalization of individual, affective concerns precisely by using such materials. In analyzing one example of the problem-solving process

more closely, I reveal the objectification process that takes place through sticky notes and whiteboards. During these sessions, emotional problems turn into abstract and collective matters of concern. The analysis lastly highlights the regulatory power of management mechanisms in industrial tech development, revealing how the instrumental use of intimacy and emotions also exploits work practices and creates committed employees, leading to the commodification of even affective capacities. This new mode of collaboration blurs the boundaries between work and personal life, bearing potential risks of work intensification, self-optimization and enforced commitment. In this chapter, I argue that agile teams are increasingly tied to their workplaces, prioritizing corporate aims over personal needs, thus risking the acceptance of exploitation and the subordination of individual interests to corporate profits. This chapter therefore reveals a new mode of management and work where rationales such as efficiency and productivity are closely entangled with care and mutual support of team members' concerns and emotions.

In response to prevailing debates on flat hierarchies, Chapter 6 sheds light on the organizational structure expected in agile methodologies. I argue that agile principles of flattened hierarchies are manifested through a mechanism of what I term *scripted ranking*, creating hierarchical relationships between the involved actors. In presenting the promise of flat hierarchies, I discuss how flat hierarchies are projected into the increased focus on the customer and the product, thus, it is claimed, resulting in the power relations becoming more balanced. The second part of this chapter then focuses on how this promise is put into practice, arguing that hierarchies are still present in agile workplaces. Framed here as a *script of ranking*, I illuminate how expectations of privileged roles, authority and rankings are deeply manifested in the establishment of positions in the project team, levels of skill and expertise, the role of the customer and processes of work coordination. In analyzing the underlying expectations, values and imaginations toward flattened hierarchies, I demonstrate that roles previously at the top of the company's hierarchy are expected to maintain their influence and, thus, power over others' actions. This is, nevertheless, not because of former status roles being reproduced but because controlling scripts are inscribed in the roles, positions, the related tasks, interactions, work habits, distributed responsibilities and artifacts. This perspective highlights that also new hierarchies (among employees and between them and customers) in agile workplaces arise. In the last part of this chapter, I demonstrate how essential work practices and responsibilities that produce value for the organization are invisibilized by the script.

The last chapter concludes this study with reflections on the intricate dynamics and tensions that the empirical findings and conceptual considerations have uncovered. On the one side, it discusses the yet persistent modes of control in agile workplaces, even though debates around 'the end of management' claim differently. As this book has shown, the promise of greater adaptability, close supportive teamwork and flattened hierarchies comes at a high price. Applying agile principles does not eliminate control regimes;

other forms of more subtle regulatory forces such as self-optimization, care, intimacy, work commitment and growing accountability are now at play. Reflecting on these empirical insights, this chapter discusses the theoretical and practical implications of this study beyond the scope of agile management. I emphasize the value and strengths of applying a relational, symmetrical script analysis to the field of management and organization studies. I explain that different objectives, interests and expectations translate into scripts or programs of actions, which get manifested in a variety of human and nonhuman entities, shaping, guiding and controlling work. I underline the importance of paying attention to the physical dimensions of material objects and demonstrate that power relations are deeply ingrained in even mundane artifacts such as sticky notes or workplace furniture. The study also illuminates a new form of managerial control over the affective and emotional capacities of workers and employees. This is particularly important to explore these tendencies more closely – also in future research – because contemporary workplaces and management styles suggest a drastic shift in exploiting emotion work more intensively (Coban and Wenten 2021; Pugh 2022; Waters and Duff 2021). This chapter concludes with reflections and open questions about the politics of agile management and how they can be also framed as tools for resistance, solidarity and an intimate bonding force for workers' rights.

Overall, this study presents a new interpretation of agile management in revealing the underlying mechanisms of agile management from a social sciences perspective. It adds a novel lens to analyses of the regulative power of management methodologies by studying the conditions and causes of agile management rather than focusing exclusively on its effects once it is implemented in practice. The study extends our understanding of the heterogeneity of humans and nonhumans contributing to management, even beyond the scope of human action. It thus invites us to regard management mechanisms and their controlling dynamics as executed by socio-material relations and the physical properties of artifacts enabling, constraining and controlling human's actions.

Notes

1 There are still very different understandings and approaches framed as agile. I will come back to its core principles later in this chapter.
2 Often understood as a response to former management approaches in technology development, agile methodologies began with a strong criticism of the conventional, rigid and bureaucratic models from the mid-20th century. People working in the software industry got increasingly dissatisfied with the then current management style, referred to as the waterfall model (Beck et al. 2001). The model's origin dates back to a NATO conference on software engineering that sought to improve quality management and the organization of software and hardware (Naur and Randall 1968). It was characterized by long, stable and fixed stages in the development of a specific product. However, the model was increasingly negated by software engineers who sought to replace the high expense of

documenting, communicating and negotiating coupled with a strict top-down structure, with a more flexible development process and self-organized and autonomous work teams.

3 Certainly, these theoretical distinctions can be made differently. Chiapello and Gilbert (2019), for instance, differentiate existing research on management tools (here understood as practices or devices to coordinate organizational activities and their alignment with work processes, see Chiapello and Gilbert 2019, 26) between critical approaches concerned with domination and exploitation, institutional approaches interested in the role of institutions and interactional perspectives studying the relations between actors and management tools.

4 The paradox of autonomy and control is, for instance, characterized by the tensions between self-organized, autonomous teamwork on the one side and emerging forms of collective monitoring and control on the other (e.g. Bader and Kaiser 2017).

5 Although not in every example I am presenting in this book there was a person with a particular title, the people were, in fact, still assigned to similar activities related to these entitled positions. For instance, in some cases, there was no title of a Scrum Master but, nevertheless, some individuals were responsible for similar activities of the Scrum Master's tasks of moderating the meetings.