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Twittering about Digital Human Resource Management: Digital field development in the context of social media

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Aalto University

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Abstract

Social media have revolutionized communication for individuals and organizations, redefining the spatial-temporal framework of interactions and amplifying diverse voices. However, their impact on institutional fields, i.e., communities of actors who interact frequently and share a common meaning system, has received little attention. To address this, I propose the term "digital field" to describe institutional fields that emerge within social-media contexts. To enhance understanding of digital fields, I study the development of a digital field centered around the issue of digital Human Resource Management (digital HRM) on Twitter. Digital HRM involves the use of digital technologies to improve efficiency, effectiveness, and strategic orientation of HRM, offering a rich context for investigating digital fields.

This dissertation comprises three essays. Essay 1 underscores the significance of incorporating online data alongside traditional qualitative and quantitative data for the study of HRM phenomena. It also introduces analytical methods like network-text analysis. The empirical part of the dissertation leverages social-media interactions and discourse among 473 individual and organizational actors within the identified digital HRM field on Twitter, generating 818,302 tweets and retweets, and 93,626 dyadic relationships based on their retweets.

Essay 2 examines the relational structure of the digital HRM field through retweet interactions that facilitate the flow of information, identifying four roles played by key actors: information leader, information disseminator, information broker, and information influencer. It also reveals the fluid and permeable nature of digital fields, with leading actors often coming from outside the boundaries of the field and assuming multiple roles.

Essay 3 delves into the social-media discourse of these actors, identifying three discursive practices: i) raising awareness of digital HRM, ii) advocating digital technologies, and iii) practicing digital HRM using Twitter as a tool. It also reveals that field actors use various discursive practices simultaneously to try to create favorable meanings aligned with their interests.

This dissertation makes several contributions. First, it offers a fresh approach to studying HRM phenomena using social-media data and methods that combine computational and qualitative traditions. Second, it sheds light on the relational structure and discursive practices that define the digital HRM field on Twitter, emphasizing its fluidity, permeability, and emergence of novel central actors. Third, it advances HRM research by identifying a broader set of actors and practices shaping the development of digital HRM through relational and discursive means.

Keywords digital HRM; digital fields; institutional theory; social media; online data; social network analysis; author-topic modeling

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Athens, 31 October 2023
Kalliopi Platanou

Contents

Part II

List of Essays

This doctoral dissertation consists of a summary and of the following essays which are referred to in the text by their numerals.

1. Platanou, Kalliopi; Mäkelä, Kristiina; Beletskiy, Anton; Colicev, Anatoli (2018). Using online data and network-based text analysis in HRM research. Journal of Organizational Effectiveness: People and Performance, Volume 5, Number 1, pp. 81-97. ISSN: 2051–6614. https://doi.org/10.1108/JOEPP-01-2017-0007.

2. Platanou, Kalliopi. Retweeting on Digital Human Resource Management: Mapping the relational structure of a digital field on Twitter. Unpublished essay.

3. Platanou, Kalliopi; Sdraka, Maria; Vuorenmaa, Hertta. Tweeting on digital Human Resource Management: Exploring the attempts to create meanings within digital institutional fields. Unpublished essay.

Author's Contribution

Essay 1: Platanou, Kalliopi; Mäkelä, Kristiina; Beletskiy, Anton; Colicev, Anatoli (2018). Using online data and network-based text analysis in HRM research. *Journal of Organizational Effectiveness: People and Performance*, Volume 5, Number 1, pp. 81-97.

Kalliopi Platanou is the lead author of this essay. She developed the research idea together with Kristiina Mäkelä, the second author of the essay. Kalliopi Platanou was the primary author of the essay, and responsible for the methodological review, including the illustrations from her research. Kristiina Mäkelä contributed to the positioning of the methodological review and creating an agenda for future HRM research. Anton Beletskiy contributed to the literature research and writing of the methodological review. Anatoli Colicev brought his expertise on the use of social media in research into the methodological review.

Essay 2: Platanou, Kalliopi. Retweeting on Digital Human Resource Management: Mapping the relational structure of a digital field on Twitter. *Unpublished essay*.

Kalliopi Platanou is the sole author of this essay.

Essay 3: Platanou, Kalliopi; Sdraka, Maria; Vuorenmaa, Hertta. Tweeting on digital Human Resource Management: Exploring the attempts to create meanings within digital institutional fields. *Unpublished essay*.

Kalliopi Platanou is the lead author of this essay. She developed the research idea, and she was responsible for the theoretical framework and positioning of the essay. She was also responsible for the data collection and procedure of the analysis. Maria Sdraka contributed to the essay bringing her expertise in machine learning. She was responsible for writing the code which facilitated the data collection and analysis following the instructions of the first author based on the aims of the essay. Hertta Vuorenmaa contributed to the essay bringing her expertise in HRM research and qualitative analysis. Together with the first author, she was responsible for the qualitative part of the data analysis and findings interpretation. She also contributed to the theoretical framing and positioning of the results.

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Part I: Summary

1. Introduction

1.1 The motivation for the research

> "Social media is the ultimate democratizer, equalizer, uniter and divider because it gives a voice and platform to anyone who is willing to engage."
> Amy Jo Martin, Founder/CEO at Renegade Global, Investor, Author & Speaker

A field is a community of actors who share a common meaning system, interact frequently, and come together around a specific issue of interest (DiMaggio & Powell, 1983; Scott, 1995; Hoffman, 1999). Existing research on fields has generally assumed that actors are co-present in space and time (Berger & Luckmann, 1967; Meyer & Vaara, 2020). However, social-media communication challenges these fundamental assumptions because traditional 'here and now' face-to-face interactions have become digital ones that are 'here and then' and 'there and then' (Thompson, 2005; Meyer & Vaara, 2020). More specifically, social media have redefined two aspects of communication patterns – the spatial-temporal framework of interactions and actor participation. First, compared with non-digital contexts, social media allow interactions that cross geographical, spatial, and temporal boundaries (e.g., Meyer & Vaara, 2020; Treem et al., 2020). In practice, this means that content created at a specific time in a specific location and on a specific platform can be seen at different points in time from any place around the world. Others can also react to such content at any time in the future and from anywhere. Second, social media have created opportunities for diverse groups of actors to become visible and a plurality of voices to be heard (Etter, Ravasi, & Colleoni, 2019; Gümüsay, Raynard, Albu, Etter, & Roulet, 2022).

With this dissertation, I contribute to this research area by examining how social media shape the development of an institutional field. In doing so, I propose the term "digital field" to describe an institutional field that emerges and evolves around a specific issue within a social-media context, and define it as a temporary arrangement of individual and organizational actors who are brought together because of increasing attention to an issue, interact frequently, and actively participate in shaping meanings of the issue in question (DiMaggio & Powell, 1983; Scott, 1995; Hoffman, 1999; Coraiola et al., 2018). I focus on examining the development of a field of digital Human Resource Management

(digital HRM) on the Twitter[1] social-media platform. More specifically, I examine the relational structure of the digital field which is operationalized through the retweet interactions of field actors representing the flow of information in the field (Essay 2). I also explore the discursive practices that field actors use in trying to create meanings of digital HRM through their social-media discourse on Twitter, i.e., tweeting (Essay 3).

Digital HRM presents an interesting context for exploring the development of a digital field, both theoretically and empirically, because of its multifaceted nature and because it is still in an emergent state. In this dissertation, I draw on the extensive research on electronic HRM (e.g., Bondarouk & Ruël, 2009; Bondarouk et al., 2017; Bondarouk & Brewster, 2016), and define digital HRM as the use of digital technologies to enhance the efficiency, effectiveness, and strategic orientation of HRM activities, practices, and processes. Digital HRM has the potential to incorporate various digital technologies which are used to improve or automate a range of HRM and organizational processes such as performance management and remote working. The lack of conceptual clarity (Strohmeier, 2020a) has led to ambiguity regarding what digital HRM entails for diverse actors including HR practitioners, employees, and top management. Moreover, approaches currently vary and standardized or legitimized approaches to implementing digital HRM technologies and conducting digital HRM within organizations are still emerging. Consequently, this leaves HR practitioners with limited guidance on how to navigate such a complex and rapidly changing digital environment. I therefore advance existing research in institutional fields and HRM by establishing understanding of the development of institutional fields and digital HRM in a social-media context.

1.2 Research objective and questions

Against the background depicted above, I depart from traditional approaches in studying institutional fields and digital HRM moving their examination from physical spaces to digital spaces. This approach is different from previous ones in that it allows investigation of institutional fields and digital HRM through social-media data which are not self-reported and not produced by researchers but instead they are naturally occurring (Bail, 2017) resembling to a large extent real-life data (Powell & Oberg, 2017). More specifically, I aim to find out:

How does an institutional field of digital HRM develop within the context of social media?

[1] It is important to note that Twitter has been rebranded to X as of July 2023. This rebranding is part of its transformation since Twitter was acquired by Elon Musk's X Corp in October 2022, with the aim to become an application that can do everything from communicating with others to performing financial transactions while ensuring freedom of speech (e.g., Ivanova, 2023). In this dissertation, I will refer to X as Twitter which was the official name of this social-media platform during the data collection period, i.e., February 2018.

In answering this question, I introduce the concept of digital fields as a theoretical and analytical tool. Figure 1 below provides the theoretical framework that guides this research.

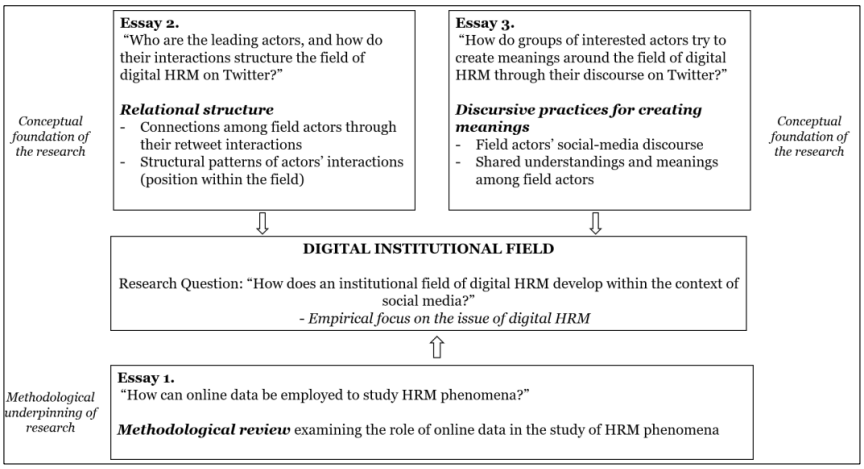


Figure 1. The theoretical framework of the dissertation

Essay 1 (Platanou, Mäkelä, Beletskiy & Colicev, 2018) discusses the use of online data such as blogs, discussion forums, and social media in the investigation of HRM phenomena. More specifically, Essay 1 asks the following question:

How can online data be employed to study HRM phenomena?

The essay offers a methodological review which highlights the importance of incorporating online data in HRM research and serves as a foundational argument for the current research. Alongside establishing the need for this approach, the review offers insight into analytical methods such as network-based text analysis that can be used to analyze large datasets. The essay also proposes a range of HRM research topics at multiple levels, including micro, meso, and macro levels, which could potentially benefit from incorporating online data in their research designs.

Building on the ideas and questions presented in Essay 1, I use Twitter, a social-media platform, as the research setting for data collection. Specifically, I consider Twitter a digital discursive space that enables individuals and organizations to share their experiences, beliefs, perspectives, and professional practices regarding specific issues. To investigate the development of an institutional field of digital HRM in the context of social media, I propose the concept of digital fields. To explore the concept of digital fields, I build on a digital field identified on Twitter around the issue of digital HRM (see Chapter 4, Section 4.4.1 for a detailed description of the process of identifying a digital field). This digital field comprises 473 individual and organizational actors, whose social-media discourse consists of 818,302 tweets and retweets and 93,626 dyadic relationships based on their retweets.

To further understanding of digital fields, I investigate the relational structure and discursive practices for creating meanings of the identified field of digital HRM on Twitter. In Essay 2, I examine the relational structure based on the retweet interactions of field actors which represent the flow of information in the field. To this end, I ask the following question:

- *Who are the leading actors, and how do their interactions structure the field of digital HRM on Twitter? (Essay 2)*

The analysis of the relational structure enables identification of structural patterns of interactions (Scott, 2014) and central actors who can influence the field of digital HRM within the specified spatial and temporal boundaries of Twitter.

On the other hand, in Essay 3 I examine the social-media discourse produced by field actors to identify the discursive practices that they use in their attempts to create meanings of digital HRM on Twitter. In turn, I pose the following question:

- *How do groups of interested actors try to create meanings around the field of digital HRM through their discourse on Twitter? (Essay 3)*

The analysis of the social-media discourse enables identification of patterns of shared understandings and meanings that emerge from field actors' tweeting (Scott, 2014; Phillips et al., 2004).

1.3 Key concepts of the research

This research builds on several underlying conceptual assumptions about institutional fields and their development in the context of social media. These are presented in the following.

Institutional fields

In this dissertation, I adopt Scott's (1995) definition of institutional fields according to which they consist of a community of collective and individual actors who "partake of a common meaning system, and whose participants interact more frequently and fatefully with one another than with actors outside the field" (p.56).

Digital fields

Building on previous research on fields (e.g., DiMaggio & Powell, 1983; Scott, 1995; Corailoa et al., 2018), I define digital fields as a temporary arrangement of individual and organizational actors brought together because of increasing attention to an issue, who frequently interact and actively participate in shaping meanings around the issue in question.

Relational structure

The relational structure of fields refers to structural patterns of interactions in fields and the positions that actors take within fields such as dominant or peripheral (Scott, 2014; Bourdieu & Wacquant, 1992). The relational structure of fields is typically examined through network representations in which actors are presented as nodes and the relationships among actors as ties (Powell & Oberg, 2017). Social media allow tracing naturally-occurring, real-time interactions without researcher's intervention (Bail, 2017) and can reflect different types of relationships. In this dissertation, the relational structure of the field of digital HRM on Twitter is examined through the retweet interactions of field actors which shows the flow of information in the field.

Discursive practices for creating meanings

Creating meanings is an integral part of fields and concerns "the construction of the meanings that guide social actors and inform prospective action" (Purdy, Ansari, & Gray, 2019: 410). Meanings in fields are usually examined through the linguistic choices of actors such as discourse, rhetoric, and framing (Leibel, Hallet, & Bechky, 2018). In this dissertation, I focus on the discursive aspect of meanings and view discourse as a means through which individuals and organizations organize, disseminate, and consume information regarding new issues and practices, e.g., the practice of digital HRM (Phillips et al., 2004). Moreover, according to Phillips, Lawrence, and Hardy (2004), the relationship among discourse, meanings, and the action of generating texts is constitutive. In turn, I consider social-media discourse as a discourse that is generated by individuals and/or organizations within the spatial boundaries of a social-media platform. Thus, social-media discourse is a tool that field actors employ to share their opinions and promote their viewpoints and agenda, thereby enacting meanings in a field.

Digital HRM

Digital HRM is the context of this research and, I define it as the use of digital technologies to enhance the efficiency, effectiveness, and strategic orientation of HRM activities, practices, and processes (Bondarouk & Ruël, 2009; Strohmeier, 2020a). This suggests that digital HRM relates to the integration of digital technologies such as cloud computing, mobile, and analytical applications, into HRM activities and practices that have a direct impact on the ways in which HR practitioners perform their tasks and work. Furthermore, I consider that digital HRM entails four aspects, namely the digital technologies as its enabler, the impact of digital technologies on HRM practices, the outcome of implementing digital technologies for HRM and organizations, and the actors involved in shaping its understanding and meanings.

Social media

Social media are defined as "digital platforms that facilitate information sharing, user-created content, and collaboration across people" (McFarland & Ploy-

hart, 2015: 1653). Social-media platforms facilitate greater visibility of communication to wider audiences while crossing temporal and spatial boundaries (Treem, Leonardi, & van den Hooff, 2020). Moreover, the technical features of social-media platforms such as using hashtags, mentioning other users in messages, and re-sharing messages, have the potential to amplify the reach and impact of a message.

Online data

This dissertation relies on and extends understanding of using online data for organizational and HRM research. More specifically, in Essay 1 we define online data as "textual data that have been produced in one or more online domains such as websites, online news, social-media platforms, blogs and discussion forums, and which, upon their production, were not intended to be used in organizational research" (Platanou, Mäkelä, Beletskiy, & Colicev, 2018: 82). In turn, Essays 2 and 3 accentuate the importance of social-media data in the development of institutional fields highlighting their potential added value due to their naturally occurring nature (Bail, 2017) and resemblance to real-life data (Powell & Oberg, 2017).

1.4 Scope and delimitations of the research

In this section of the introduction, I discuss the scope and limitations of the research. First, this research focuses on the relational and discursive aspects of institutional field formation and development within a social-media context. Although previous research has identified that institutional fields are multimodal in nature including aspects such as discursive, relational, material, visual, temporal, and affective (Grodal & Granqvist, 2014; Meyer et al., 2018), these dimensions are beyond the scope of this dissertation.

Second, this research assumes that social media have the potential to shape institutional processes and focuses on the communicative acts of actors who have generated a social-media discourse around the issue of digital HRM. It is important to acknowledge that social-media communication, like any other form of communication, involves elements such as a sender, a message, a receiver, and a medium. Since the aim of this research is to examine how actors try to influence the structure and meanings of the digital HRM field through their social-media interactions and discourse, the focus of this dissertation is on the senders of the messages and the messages themselves; social-media data provide limited information on the receivers' actions beyond retweeting and liking, and thus there are outside the scope of the research. Furthermore, it is important to recognize that the motives of the actors (senders) are not examined in that these actors were not interviewed. Instead, information is derived from the biography section of their social-media account where actors presented themselves, shedding light on their organizational and professional identities and status. Consequently, the analysis is restricted to the information provided by the actors in this way.

Third, in this dissertation, I incorporate data from multiple contexts to provide an increased understanding of the field of digital HRM, hence I do not examine any specific organizational context. Moreover, digital HRM is a multifaceted issue involving various HRM practices such as recruitment and talent management, broader organizational issues like remote working, and digital technologies. To gain a deeper understanding on digital HRM, I concentrate on the social-media discourse employed by field actors in discussing such practices and technologies, and the meanings they assign to them, and thus I do not focus on any specific practice or organizational issue in this dissertation.

1.5 Structure of the dissertation

This dissertation consists of two parts, Part I and Part II (see Figure 2).
Part I explains the motivation, conceptual foundation, and methodological choices of the research and synthesizes the findings from individual essays into a coherent piece of work. Part I starts with the introductory chapter (Chapter 1), which sets the scene and overall storyline of the research. Chapter 2 provides an overview of digital HRM as the empirical context of the dissertation. Chapter 3 presents the theoretical perspective used in this research. Chapter 4 focuses on the methodological choices and research design including detailed steps on the boundary construction of the digital field, analysis strategies as well as reflections on these choices and a discussion of the ethics associated with conducting research with social-media data. Chapter 5 offers a summary of the individual essays; it focuses on the most relevant insights contributing to development of the digital field concept and understanding of digital HRM. Finally, Chapter 6 discusses the theoretical contributions, practical implications of the dissertation, and makes suggestions for further research on the topic. Part II details the individual essays which comprise this dissertation.

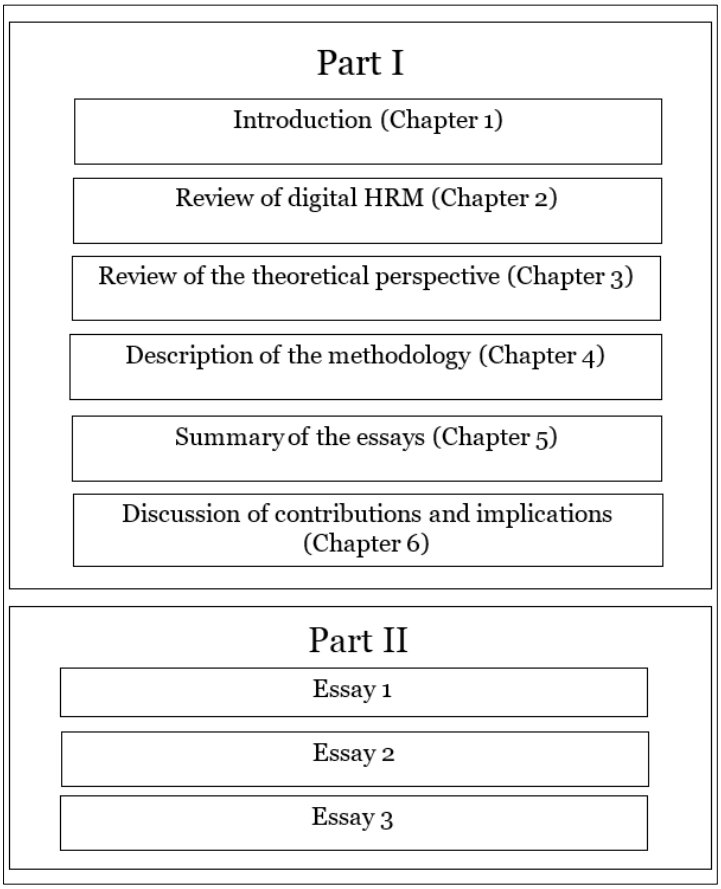


Figure 2. Structure of the dissertation

2. Review of digital HRM

In this chapter, I discuss aspects related to digital HRM, the empirical context of the research. To enable a comprehensive understanding of digital HRM, I have included a short overview of the HRM research field. I then synthesize findings from research on the impact of technology and HRM that was largely conducted under the umbrella of the term electronic e-HRM (e-HRM). The purpose of this chapter is to establish an understanding of digital HRM within the context of this dissertation, rather than to offer an exhaustive review of the issue (for some excellent reviews see Bondarouk, Parry, & Furtmueller, 2017, as well as Kim, Wang, & Boon, 2021).

2.1 Background: A brief overview of the HRM research field

HRM refers to "all those activities associated with the management of work and people in organizations" (Boxall & Purcell, 2011: 1). As such, HRM is a practice that is universally adopted by organizations to manage their people effectively. This involves a diverse range of processes and practices that are influenced by multiple organizational, institutional, and cultural factors. Moreover, HRM is a management occupation that strives to attain power, status, and legitimacy by demonstrating its contribution to organizational objectives (Wright, 2008). At the same time, HRM aims to achieve wider societal value by balancing the interests and well-being of employees with organizational efficiency (Kochan, 2004; Pohler & Willnes, 2014). Consequently, HRM research covers an extensive range of subjects, spanning different levels that include the societal, organizational, and individual.

Research in the field of HRM at the individual or micro level has a primary focus on investigating the impact of HRM practices on employees. This research area aims to explore the potential for HRM practices to enhance employee productivity, job satisfaction, and engagement, while also evaluating individual characteristics such as skills, attitudes, and abilities in relation to crucial performance metrics, including absenteeism, productivity, and turnover (e.g., Baloch, 2009; Susanty, Miradipta, & Jie, 2013; Gruman & Saks, 2011; Robertson & Cooper, 2010). Scholars often use psychology and organizational psychology theories to further explore these relationships.

An area of HRM research that holds significant importance involves analyzing organizations or business units as the level of analysis (meso-level) to explore the impact of HRM practices on organizational outcomes, such as firm performance (e.g., Becker & Huselid, 1998; Combs, Liu, Hall, & Ketchen, 2006;

Huselid, 1995). HRM scholars (e.g., Boxall & Purcell, 2011) often use the universalistic ("best practices" model) or contingency, configurational, or contextual ("best fit" model) perspectives to investigate this relationship further. This line of research has demonstrated that the effectiveness of HRM practices depends largely on the context in which they are implemented. This research also highlights the varied roles played by the HRM function, leading to the emergence of several typologies regarding the role of the HRM function (e.g., Storey, 1992; Ulrich, 1997; Ulrich & Brockbank, 2005). Among the most dominant of these typologies in both HRM research and practice is Ulrich's (1997) classification of the HRM function as administrative experts, employee champions, change agents, and strategic partners. Despite calls for the HRM function to adopt a more strategic role, there is no consensus on how best to realize this role (e.g., Barney & Wright, 1998; Hope-Hailey, Farndale, & Truss, 2005).

At the macro-level of HRM research, the focus is primarily on employment relations, wherein a pluralistic perspective is adopted, recognizing the inherent conflict between employees and management due to their opposing interests (Legge, 1975; Tsui, Ashford, Clair, & Xin, 1995). This type of research investigates actors beyond organizational boundaries, such as governments, labor unions, and worker organizations (e.g., Brewster, Croucher, Wood, & Brookes, 2007; Delbridge & Keenoy, 2010). The significance of these actors has grown with the emergence of the gig economy and flexible working arrangements, which have caused changes in employment contracts and statuses. Furthermore, the field of International HRM (IHRM) investigates the transfer of HRM practices across countries, offering an opportunity for multi-level analysis. For example, IHRM research has examined the impact of formal institutions on the transfer of HRM practices between countries, as well as the perceptions of local HR practitioners who implement these practices (e.g., Björkman, Fey, & Park, 2007).

2.2 Conceptualizing digital HRM

Since the advent of computers in the workplace in the 1970s, the rapid pace of technological advancements has altered the field of HRM significantly. These changes have affected not only the nature of work, but also the tasks and responsibilities of HR professionals, and the HRM function within organizations.

Strohmeier (2020a) broadly defines digital HRM as the "socio-technical result of the digitalization of HRM" (p. 352), while digitalization of HRM refers to the process by which digital data about employees, work, and HRM practices are used for operational or strategic HRM purposes (Parry & Strohmeier, 2014; Strohmeier, 2020a). On the other hand, drawing on e-HRM research, Thite (2019) offers a comprehensive definition of digital HRM as follows:

"Digital HRM deals with the nature, role and contribution of technology in strategically managing talent in a digital world. It incorporates social, mobile, analytics, cloud (SMAC) and other emerging technologies for efficient and effective delivery of HR services. It covers related management trends in performing the operational, relational and transformational aspects of HR, such

as the devolution of HR administration via self-service applications, shared services, and outsourcing as well as strategic aspects involving evidence based on big data, predictive analytics, artificial intelligence, and managerial insights. It is also conscious of and addresses unintended consequences of technology, including implications for information security and privacy." (Thite, 2019: 8)

This definition highlights the multifaceted nature of the digital HRM concept which has the potential to incorporate diverse issues, practices, and technologies, offering new possibilities for conducting HRM activities and practices. In this dissertation, I adopt the term digital HRM to describe the use of various technologies such as software packages, cloud-computing technologies, mobile applications, and analytics technologies for HRM purposes. Specifically, I define digital HRM as the use of digital technologies to improve the efficiency, effectiveness, and strategic orientation of HRM activities, practices, and processes.

It is important to note that the digital HRM review presented in this section is grounded in the electronic HRM (e-HRM) research (e.g., Ruël, Bondarouk, & Looise, 2004; Strohmeier, 2007; Bondarouk & Ruël, 2009; Parry & Tyson, 2011; Marler & Fisher, 2013; Bondarouk et al., 2017). E-HRM is commonly defined as "all possible integration mechanisms and contents between HRM and information technologies (IT), aiming at creating value within and across organizations for targeted employees and management" (Bondarouk & Ruël, 2009: 507). I perceive e-HRM and digital HRM as synonymous terms that express the same phenomenon. In this dissertation, I use the term digital HRM in that it better reflects the phenomenon in the data that I collected. To illustrate, words related to digital such as 'digital', '#digital', '#digitaltransformation', '#digitalhr', '#digitalworkplace', '#digitalworkplace', 'digitalization', '#digitalrecruitment', '#digitalleadership', appear 11,227 times, whereas words related to electronic such as 'electronic' and '#electronic', appear only 158 times (see Appendix A and B for a list of the top 250 words and hashtags from the data).

In sum, building on e-HRM research and recent definitions of digital HRM, I argue that digital HRM entails the following three key elements: digital technologies as enabler of digital HRM, the impact of digital HRM on HRM practices, and the impact of digital HRM on organizational outcomes. Moreover, as a multifaceted issue, digital HRM can have a different meaning for different actors. Therefore, I consider actors' involvement in defining digital HRM an important aspect of comprehending this issue. In the following I discuss these main aspects of digital HRM starting with the actors involved in shaping digital HRM in that it is a focal point of this research.

2.2.1 Digital HRM and actors involved

The actors involved in digital HRM are decisive for the planning, implementation, and success of digital technologies for HRM and include HR professionals, line managers, employees, consultants, professional services, and software vendors (Strohmeier, 2007; Bondarouk & Ruël, 2009). Such individual and organizational actors are important components in digital HRM research

(Strohmeier, 2007). However, not all relevant actor categories have been examined in the same depth in extant research. Due to the prevalent focus on the organizational level, HR practitioners and line managers have received the most attention and a broader set of actors such as consultants, IT providers, and media have thus far been overlooked (Strohmeier, 2007; Bondarouk & Brewster, 2016; for some exceptions see Heikkilä, Brewster, & Mattila, 2014; Marler, Cronemberger, & Tao, 2017; Bondarouk, Ruël, & Roeleveld, 2019). Yet examining the roles and perspectives of the various actors in digital HRM is critical for understanding the development of digital HRM strategies and systems.

In addition to examining different actors, extant HRM research has also taken different levels of analysis as established in section 2.1. For example, previous research in the HRM field has largely focused on micro-level examining the perceptions of individual actors including employees, HR practitioners, and line managers (e.g., Brewster, Gollan, & Wright, 2013; Cunningham & Hyman, 1999), meso-level focusing on organizational actors such as the various units and HR departments (e.g., Hope-Hailey, Farndale, & Truss, 2005), as well as macro-level examining the activities of collective actors such as HR professional associations (e.g., Farndale & Brewster, 2005; Pohler & Willness, 2014). However, HRM research has been criticized for adopting a narrow perspective on the involvement of actors in HRM issues with HRM scholars calling for a multi-actor approach (Björkman et al.,2014; Sanders et al., 2014; Mäkelä et al., 2014).

In this dissertation, I argue that examining HRM phenomena through the lens of institutional fields can enhance understanding of the complexities and challenges facing HRM practices in contemporary business environments and respond to calls of multi-actor approaches in HRM (e.g., Lewis, Cardy & Huang, 2019; Holm, 2020a). More specifically, examining the HRM field enables researchers to identify a totality of relevant actors (DiMaggio & Powell, 1983) and how they collectively try to shape the discourse, meanings, and practices around HRM-related issues. Such an approach can therefore provide insights into the emergence of new HRM practices and facilitate a deeper understanding of how these practices are disseminated across organizations. Moreover, a field-level approach can help illuminate how disruptive changes in the environment such as those caused by digital technologies, transform HRM practices.

2.2.2 Digital technologies as enablers of digital HRM

HRM is a non-technical field, but digital technologies are of interest to various groups of actors, including HR professionals, employees, top management, IT providers, and professional associations (Strohmeier, 2007) in that they have the power to change the way HRM is conducted. Following the general discussion on the digitalization of organizations, Strohmeier (2020b) employs the concept of SMACIT (Social-, Mobile-, Analytics-, Cloud-, and Internet of Things-) Technologies to categorize digital technologies as a driving force for digital HRM. In this section, I follow the same conceptualization of digital technologies to describe their relevance to HRM.

Social media are "digital platforms that facilitate information sharing, user-created content, and collaboration across people" (McFarland & Ployhart, 2015:

1653). Social (media) technologies provide HRM with the opportunity to connect with each other, communicate, collaborate, share information, and build online communities (Armstrong & Taylor, 2020; Strohmeier, 2020b). These technologies typically involve a website or a mobile application that allow people to interact with each other via instant messaging or posting relevant information (Armstrong & Taylor, 2020). The most important feature of social-media technologies is that they are interactive and enable conversations between different stakeholders such as employees, line managers, and management (Armstrong & Taylor, 2020). Social media, such as LinkedIn, are utilized extensively in recruitment, employee communication, collaboration, and engagement (Battista & Parry, 2020) and employer branding (Bondarouk, 2020). In recent years, organizations have introduced enterprise social-media platforms, which in principle operate the same way as commonly used social-media platforms (e.g., Facebook) and enable or constrain how work is done through communication activities (Leonardi et al., 2013). For example, these technologies have significant implications for knowledge sharing and management, collaboration among employees, relationships, and social capital management (Leonardi et al., 2013).

Mobile technologies include cellular technology, 4G technology, Wi-Fi, and Bluetooth that connect various mobile devices such as smartphones, tablets, laptops, and other handheld gadgets (Dewan & Jena, 2014; Armstrong & Taylor, 2020; Strohmeier, 2020b). In the HRM context, these technologies allow employees and HR practitioners access to application technologies at any time and anywhere (Strohmeier, 2020b). A recent report by Deloitte found that 41 per cent of the HRM teams are building mobile applications for delivering HR services while 56 per cent of the surveyed companies are planning to redesign their HR function to use mobile tools (Deloitte University Press, 2017). Mobile technologies are usually utilized for recruitment, learning, and HR administration processes (Armstrong & Taylor, 2020; Strohmeier, 2020b). According to Strohmeier (2020b), the benefits of mobile technologies for HRM include time saving, and improvements in efficiency and process flows.

Analytical technologies refer to the use and analysis of digital data with the aim to provide HRM with the possibility to make informed and evidence-based decisions (Marler & Boudreau, 2017). Specifically, HR analytics is an "HR practice enabled by information technology that uses descriptive, visual, and statistical analyses of data related to HR processes, human capital, organizational performance, and external economic benchmarks to establish business impact and enable data-driven decision-making" (Marler & Boudreau, 2017:15). Depending on the type of analysis, HR analytics fall into four levels of data analysis (Armstrong & Taylor, 2020; Strohmeier, 2020b). First, descriptive analytics which refer to more conventional methods of analysis which aim to produce reports including information on what has happened such as employee turnover and absence rates (Armstrong & Taylor, 2020; Strohmeier, 2020b). Second, multidimensional analytics which aim to establish any relationships (correlations) between different variables to explain why something has happened

(Armstrong & Taylor, 2020). Third, predictive analytics involves the employment of advanced methods to analyze historical data with the aim to predict what will happen and therefore provide guidance (Armstrong & Taylor, 2020; Strohmeier, 2020b). Fourth, prescriptive analytics uses sophisticated methods such as artificial intelligence, machine learning, deep learning, and big data to predict outcomes and optimal actions (Strohmeier, 2020b; Chowdhury et al., 2023).

Cloud computing is defined as "model for enabling ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources (e.g., networks, servers, storage, applications, and services) that can be rapidly provisioned and released with minimal management effort or service provider interaction" (Mell & Grance, 2011: 2). Cloud computing technologies can be provided through three main models, namely: (1) Infrastructure as a Service (IaaS), which provides access to infrastructure such as networking features and hardware for data storage; (2) Platform as a Service (PaaS), which provides a platform on the cloud for managing the applications and other settings; and (3) Software as a Service (SaaS), which refers to the use of a ready-made software package online such as web-based email (Mell & Grance, 2011). Most organizations today choose cloud computing technologies from technology providers such as Oracle, Workday, SAP, and SuccessFactors (Armstrong & Taylor, 2020; Marin et al., 2021). The advantages of cloud-computing technologies involve cost savings, flexibility, and adaptability (Armstrong & Taylor, 2020; Strohmeier, 2020b). On the other hand, it should be noted that cloud technologies raise issues related to security and privacy of services when data are stored in public clouds bringing potential risks about data breaches (Strohmeier, 2020b).

Internet of Things describes the connection of physical objects, which are equipped with sensors, to the Internet with the purpose of exchanging information with other devices (Strohmeier, 2020b). While HRM applications are not fully developed yet, Internet of Things holds a great potential for HRM as it can be used to automate HR tasks such as training through information provided by sensors that employees wear (Strohmeier, 2020b). Internet of Things technologies can also be used to identify influential and central employees within organization as well as how they collaborate with each other by performing organizational network analysis based on information gathered from employee wearables (Cross & Gray, 2021). However, such HRM applications require that organizations consider employee data privacy and anonymity as there is the risk for HRM to conduct unethical practices (e.g., following movements of employees during breaks).

Moreover, the use of digital technologies in workplaces requires the collection and analysis of digital information related to employees and workers (e.g., demographics, skills, expertise, education, and experience), work processes (e.g., productivity, performance, well-being, and sales metrics), and the workplace (e.g., data obtained from wearables and sensors). This type of information is frequently sensitive in nature, and organizations must ensure that their employees are informed about the data being collected about them, as well as how they

will be used and analyzed. To this end, organizations must comply with data privacy regulations, such as the General Data Protection Regulation (GDPR).

Algorithms provide organizations with the ability to analyze new sources of information in an intelligent and sophisticated manner. However, it is important to note that algorithms are not neutral and can be discriminatory as they reflect the biases of their creators (Stinson, 2022). As Mann & O'Neil (2016) stated, "algorithms are, in part, our opinions embedded in code." To mitigate this issue, organizations should aim to build diverse teams that can develop algorithms specific to their needs, instead of relying on commercially available tools. Additionally, algorithms are often built with historical data, which may contain biases. For instance, if an organization aims to address diversity problems in their recruitment process, they should not rely solely on past recruitment data as they may reflect these problematic issues.

Having outlined the main aspects of digital technologies, I will next present research findings on the impact of digital technologies on HRM practices and organizational outcomes.

2.2.3 Impact of digital technologies on HRM practices

In recent years, there has been a significant increase in the use of digital technologies for HRM activities and practices. These activities include various HRM functional areas such as recruitment, talent management, performance management, learning and development, and leadership (Strohmeier, 2007; Bondarouk & Fisher, 2020). In what follows, I briefly present research findings on the impact of digital technologies on these HRM practices. I have selected to focus on these practices based on the frequencies of related words and hashtags that are used by the identified actors in the field of HRM on Twitter (see Appendix A and B for a list of the top 250 words and hashtags in the data). For example, the word "recruitment" and the hashtags "#recruitment" and "recruiting" were used 8,153, 8,927, and 7,391 times respectively. Interestingly, "leadership" and "#leadership" were used 8,939 and 13,318 times respectively.

Recruitment

Recruitment through digital technologies refers to "the organization of recruitment process and activities, which by means of technology and human agents, facilitate time and space independent collaboration and interaction in order to identify, attract, and influence competent candidates" (Holm, 2014: 434). Digital recruitment can take various forms including advertising job opportunities on websites (e.g., Parry & Tyson, 2008), social-media platforms (e.g., Olivas-Lujan & Bondarouk, 2013; Jeske & Shultz, 2016), and internet job boards (e.g., Borstorff et al., 2007) as well as recruitment software systems that allow the collection and analysis of applicant information and hiring decisions (e.g., Cappelli, 2001). For example, more advanced methods like software algorithms are used to assess the personality traits of job candidates based on their social-media profiles, to the potential and performance of job candidates, and to propose which candidates should be intereviewed (Meijirink & Bondarouk,

2023). Furthermore, organizations have started to use robots in job interviews as a means of increasing perceived fairness in the selection process (Nørskov & Ulhøi, 2020). The benefits of incorporating digital technologies for recruitment involve a shift from a paper-based recruitment process to a digitally enabled recruitment (Holm, 2020b). As Holm (2020b) emphasizes, digital recruitment allows organizations to engage with a broader pool of potential applicants, reduces administrative costs, reduces time, which was dedicated to administrative tasks, and enables HR practitioners to combine recruitment with strategic tasks.

Talent Management

Digital talent management refers to the utilization of digital technologies which provide organizations with access to various digital systems such as platforms and databases that facilitate them to manage their people and talent (Wiblen, 2020). According to Wiblen and Marler (2021), technology vendors external to organizations play an influential role in the talent identification process as they create algorithms through which they standardize the process of coding, sorting, filtering, and ranking employees. While vendors may promise faster, more objective, and more accurate talent management decisions and give access to "best-practices" regarding talent management, HRM research still debates how talent should be defined and identified (Wiblen & Marler, 2021; McDonnell et al., 2017). Although the objectivity and accuracy of analyses may hold true, the data entered into the system are based on human interpretations and evaluations which might mitigate the perceived justice of the systems (Wiblen, 2020).

Performance management

The application of digital technologies to performance management for the employee evaluation is a common practice in today's organizations. Digital performance management involves the introduction of digital systems for the measurement and development of employees as well as the support of organizational goals (Payne & Mendoza, 2020). As with other HRM functional areas, the implementation of digital technologies for performance management purposes aim to diminish paper use and streamline performance management with HR strategy. Specifically, Payne, Mendoza and Horner (2018) argue that digital technologies automate, document, integrate, structure, and make evaluation process more accessible. Research has also shown that digital technologies reduce the time and effort given to tasks like data analyses, reporting, and communication (e.g., Krauss & Snyder, 2009; Pulakos, 2004). There is also evidence that more recently algorithms are used to perform sentiment analysis, to aggregate and computate performance statistics for predicting when projects may fail and predicting future employee performance, to notify managers to take corrective action, and to automate the sanctioning of poor performing employees (Meijirink & Bondarouk, 2023). Furthermore, algorithms are used for compen-

sation and benefits tasks, including automation of salary surveys and job ranking, prediction of desired levels of compensation, automation of variable pay and access to work assignments (Meijirink & Bondarouk, 2023).

Learning and Development

The use of digital technologies for learning and development purposes has made learning accessible anytime, anywhere and has increased the flexibility and training quality (Wasserman & Fisher, 2020). Specifically, various digital technologies are employed for learning and development including SaaS cloud computing solutions, mobile technologies, augmented reality, virtual reality, and algorithms (Wasserman & Fisher, 2020; Meijirink & Bondarouk, 2023). For example, algorithms are useful for conducting web searches for available training programs, evaluating training effectiveness, predicting the need for upskilling, and providing automated instructions to poorly performing employees (Meijirink & Bondarouk, 2023). What differentiates digital learning compared to traditional learning is a shift towards a more socially and learner-oriented design of training design and material (Wasserman & Fisher, 2020). In particular, digital technologies have brought significant changes in the location that trainings take place, the inclusion of employees who can participate in the trainings, the time of trainings, and the design and content of the trainings (Wasserman & Fisher, 2020). Furthermore, digital technologies enable managers to collect data for training evaluation easier.

Leadership

Digital or e-leadership refers to "a social influence process embedded in both proximal and distal contexts mediated by Advanced Information Technology that can produce a change in attitudes, feelings, thinking, behavior, and performance" (Avolio et al., 2014: 107). This definition emphasizes the complexity and dynamic between digital technologies and leadership as well as the co-constitutive nature of these notions. Although digital technologies have provided a plethora of platforms for collaboration and participation among various actors, these technologies have not fundamentally transformed the way organizations are led (Avolio et al., 2014). Yet there are some encouraging indications that online learning tools and gamification applications might have the potential to completely transform the way leadership is performed within organizations (Avolio et al., 2014). Additionally, leadership in the context of social media might be emergent and informal (Kahai et al., 2017) because online communities are not built based on formal hierarchies stemming from the organizational context but rather, they tend to develop based on visible actions, the quality, and frequency of text communication and interactions (Kahai, 2020).

In sum, the use of digital technologies for HRM activities and practices has become increasingly prevalent in organizations. These technologies enable partial or full automation of HRM-related activities, leading to more efficient and

effective HRM processes. The use of digital HRM for various HRM practices such as recruitment, talent management, performance management, learning and development, and leadership has the potential to redefine the way organizations manage their people.

2.2.4 Digital HRM and organizational outcomes

The goal of digital HRM is to create value for organizations and contribute to organizational strategy and objectives through digital technologies. Digital HRM aims to improve the efficiency, effectiveness, and strategic orientation of the HRM function (Strohmeier, 2007; Ruël, Bondarouk, & Van der Velde, 2007; Bondarouk, Parry, & Furtumueller, 2017; Parry & Peretz, 2020).

Research shows that digital HRM has the potential to reduce costs and increase the speed of administrative tasks to improve HRM activities' efficiency (Marler, 2009; Parry & Tyson, 2011). Despite these efficiency improvements, especially through the automation of routine activities, it seems difficult to measure the overall efficiency gains and losses (Strohmeier, 2007). It is also not clear whether efficiency improvement is "illusory", because of simply switching activities to managers and employees, or converting HR tasks to IT tasks (Strohmeier, 2007: 28). For example, Parry (2011) found that organizations which implemented digital HRM did not employ fewer HR managers for HRM activities compared to those which did not utilize digital technologies, thereby providing mixed evidence on the efficiency gains of digital HRM.

Digital HRM suggests that the use of digital technologies can improve HRM service delivery to employees and other internal stakeholders (Ruël et al., 2004). This is mainly related to positive perceptions of the HRM services (Bondarouk et al., 2009: Voermans & Van Veldhoven, 2007) and greater accuracy in HR data (Gardner et al., 2003). Furthermore, digital HRM research shows that it can have relational consequences related to improved HR services, better HR relationship management, and HR attitude management (Bondarouk, Parry, & Furtumueller, 2017). Findings on the effectiveness of digital HRM are mixed, with improvements shown on a general level but diverse findings concerning different activities such as digital recruitment (Strohmeier, 2007). Finally, the impact of digital HRM on effectiveness involves new types of interaction among various actors, resulting in "heterogeneous networks" (Strohmeier, 2007: 28).

A significant amount of research focuses on the impact of digital HRM on the role of the HRM function and its potential to gain a more strategic (Lepak & Snell, 1998; Strohmeier, 2007; Marler, 2009; Parry & Peretz, 2020). A central premise of digital HRM is that the integration of digital technologies into HRM processes will result in spending more time on strategic tasks rather than administrative ones (Lepak & Snell, 1998; Ruël, Bondarouk, & Van der Velde, 2007; Parry, 2011; Marler & Parry, 2016). However, there is research that suggests that this outcome was not achieved (e.g., Tansley et al., 2001). Furthermore, Marler and Fisher (2013) showed that there was no sufficient evidence to support the premise that digital HRM makes HRM more strategic. It is important to note that the impact of digital HRM on the strategic orientation of

HRM function requires more research that would identify and test causal relationships (Bondarouk et al., 2017; Parry & Peretz, 2020).

Implementing digital technologies for HRM purposes is a challenging and multilayered process. In their comprehensive review, Bondarouk, Parry, and Furtumueller (2017) identified three crucial factors for successful technology adoption, including: i) technology-related factors such as IT infrastructure and digitalization of HR data; ii) organizational considerations such as organizational capabilities, resources, and project management skills; and iii) people-related factors involving issues such as top management support, culture, user acceptance, and effective communication and collaboration between different units.

3. Review of the theoretical perspective

In this dissertation, I ask the following question: "*How does an institutional field of digital HRM develop within the context of social media?*" In addressing this question, I draw on (neo-)institutional theory (Meyer & Rowan, 1977; DiMaggio & Powell, 1983; Scott, 1995) and the concept of institutional field which is defined as community of individual and organizational actors who "partake of a common meaning system, and whose participants interact more frequently and fatefully with one another than with actors outside the field" (Scott, 1995: 56). In this dissertation, I examine the relational structure of the field of digital HRM on Twitter which is operationalized through the retweet interactions of the actors showing the flow of information in the field (Essay 2), and I explore the discursive practices that field actors use as they try to create meanings of digital HRM through their social-media discourse on Twitter, i.e., tweeting (Essay 3).

To investigate the development of an institutional field of digital HRM within the context of social media, I introduce the concept of digital fields as a theoretical and analytical tool. Building on research on institutional fields (DiMaggio & Powell, 1983; Scott, 1995; Hoffman, 1999; Coraiola et al., 2018), I define a digital field as a temporary arrangement of individual and organizational actors brought together because of increasing attention to an issue, and who frequently interact and actively participate in shaping meanings around the issue in question. Digital fields are formed around issues that may as well originate in a physical space (e.g., organization, country, society) and contribute to the overall discourse surrounding the issues in discussion. In that sense, digital fields are considered parts of broader institutional fields which, nonetheless, can provide diverse actors with the opportunity to become visible and heard due to technological affordances of social-media platforms (Etter et al., 2019). Hence, digital fields have the potential to amplify the voices and discourse surrounding an issue, thereby contributing to the overall understanding and meanings of the issue.

Building on existing literature on fields (e.g., DiMaggio & Powell, 1983; Scott, 1995), I argue that digital fields comprise multiple communities and are defined by their relational structure and discursive practices that create meanings around an issue. The social-media context differs from other physical spaces in which fields are developed in that their interactions and discourse are naturally

occurring (Bail, 2017), thereby allowing us to "analyze micro-level institutional processes at the level of real-life data" (Powell & Oberg, 2017: 460).

In the following, I present the theoretical concepts used in this dissertation, including institutions as the foundation of institutional theory, institutional fields, and digital fields.

3.1 Defining institutional theory and institutions

Institutional theory posits that the actions of organizations are not only influenced by the social, political, and economic factors part of their broader environment but also influence these external factors in their pursuit of legitimacy (Meyer & Rowan, 1977; Scott, 1995). A key assumption of institutional theory is that institutional pressures from the external environment lead organizations to adopt similar practices and vocabularies in order to be accepted and legitimized, thereby ensuring their organizational survival (Meyer & Rowan, 1977). For example, organizations may implement digital HRM practices of dominant successful organizations or competitors to gain legitimacy and guarantee their own survival (e.g., Holm, 2014; Holm, 2020a). These institutional pressures and copying behaviors can lead to increased uniformity of organizational structures in the institutional environment (DiMaggio & Powell, 1983).

The process by which organizations adopt similar practices and behaviors has been defined as institutional isomorphism which is a central concept in institutional theory (DiMaggio & Powell, 1983). DiMaggio and Powell (1983) propose three distinct mechanisms of institutional isomorphic change: coercive isomorphism, mimetic isomorphism, and normative isomorphism. Coercive isomorphism arises from the formal and informal pressure exerted by other organizations or cultural expectations in the broader institutional environment, e.g., government regulations or social persuasion (ibid.). In mimetic isomorphism, organizations imitate and model themselves after other organizations in response to institutional uncertainties (ibid.). Normative isomorphism is a result of professionalization and describes the rules, norms, routines, and values that are spread as work becomes professionalized (ibid.). Professional associations, formal education, and professional service firms are major drivers of normative isomorphism (ibid.). This brief presentation of the main premises of institutional theory sets the stage for the following discussion of the concept of institutions.

Institutions are a central point in institutional theory. In this dissertation, I consider institutions as social constructions constituted in and through communication and discourse (Berger & Luckmann, 1967; Phillips, Lawrence, & Hardy, 2004; Meyer & Vaara, 2020). According to Berger and Luckmann (1967), institutions emerge when certain actors engage repeatedly in specific behaviors and actions that eventually become accepted as guidelines for future action. It is important to note that the repeated actions that describe a practice, technology, or rule do not represent the actual "practice, technology, or rule, but rather its shared, social understanding" (Lawrence & Phillips, 2019: 190). Moreover, in-

stitutions have a "self-policing" character, as they are associated with social controls that ensure adherence to established patterns of behavior (Phillips, Lawrence, & Hardy, 2004: 637). Taken together, these insights show the crucial role played by institutions in shaping behavior in organizational contexts.

According to Scott's conceptualization (2003: 880, also Scott, 2001: 48 and Scott, 1995: 33), institutions are "*social structures that have attained a high degree of resilience. They are composed of cultural-cognitive, normative, and regulative elements that, together with associated activities and resources, provide stability and meaning to social life*." This definition highlights the notion that institutions comprise three essential elements, regulative, normative, and cultural-cognitive. The regulative elements refer to the rules, monitoring mechanisms and sanctions that influence behavior, whereas the normative elements shape, evaluate, and define social behavior (Scott, 2003). While I acknowledge the significance of each element, in this dissertation, I focus on the cultural-cognitive elements of institutions, which refer to the "creation of shared conceptions that constitute the nature of social reality and the frames through which meaning is made" (Scott, 2003: 880).

It is important to note that institutions are not static entities, but rather dynamic ideas that are transmitted across geographical locations and time through four institutional carriers: symbolic systems, relational systems, routines, and artifacts (Scott, 1995, 2001, 2003). Symbolic systems such as language involve the coding and diffusion of meaningful information (ibid.). In this dissertation, I explore the role of symbolic systems in the development of an institutional field of digital HRM in Essay 3, where I examine the discursive practices that actors use as they try to create meanings of digital HRM through their social-media discourse on Twitter, i.e., tweeting.

Relational systems, on the other hand, refer to the connections between individual and organizational actors as they build interpersonal or interorganizational relationships (Scott, 2014). In Essay 2, I examine the relational systems in the development of an institutional field of digital HRM and investigate the flow of information through the retweet interactions of actors, which are crucial aspects of flow of information in this context. Furthermore, routines and artifacts also serve as institutional carriers because they reflect the repeated patterns of actions and the material objects to facilitate performance of tasks (Scott, 2014). However, examination of these carriers lies outside the scope of this dissertation.

Recent research has emphasized that institutions are formed not only through a single mode, but rather through multiple modalities (Jancsary, Meyer, Höllerer, & Boxenbaum, 2017; Jones, Meyer, Jancsary, & Höllerer, 2017; Höllerer, Daudigeos, & Jancsary, 2018). These modalities are, for example, discursive (e.g., Phillips, Lawrence & Hardy, 2004), rhetorical (e.g., Green, Li & Nohria, 2009), visual (e.g., Meyer, Jancsary, Höllerer, & Boxenbaum, 2018), material (e.g., Jones, Meyer, Jancsary, & Höllerer, 2017), emotional (e.g., Zilber, 2017; Zietsma & Toubiana, 2018), and spatial (e.g., Lawrence & Dover, 2015; Rodner et al., 2020). Social actors may influence institutions by communicating their opinions, experiences, and concerns by selecting and combining various

semiotic resources (Höllerer, Daudigeos, & Jancsary, 2018). Specifically, social-media communication texts can include written words, images, videos, emoticons, audio, and various other semiotics, which are disseminated by individual and organizational actors in their attempt to influence institutions. The interplay of these different modes highlights the dynamic and fluid nature of institutions and the complex ways in which they are shaped by social actors. In this dissertation, I focus on semiotics such as words, hashtags, and retweets to examine the development of an institutional field of digital HRM in the context of social media.

3.2 Fields

Social-media communication has the potential to alter the formation and development of institutional fields. In this dissertation, I explore the development of an institutional field of digital HRM on Twitter examining the type of actors involved, its relational structure based on social-media interactions that show the flow of information, and the discursive practices that field actors use to create meanings through their socia-media discourse.

The concept of fields constitutes a fundamental theoretical and methodological construct in institutional theory that offers the potential to explain the emergence, evolution, and transformation of institutions over time (Wooten & Hoffman, 2017; Zietsma et al., 2017). The notion of fields functions as an 'intermediate unit' of analysis that bridges the micro and macro levels, involving individuals, organizations, and societal actors (Scott, 2014: 236). Figure 3 shows a conceptualization of the field of digital HRM and its main elements.

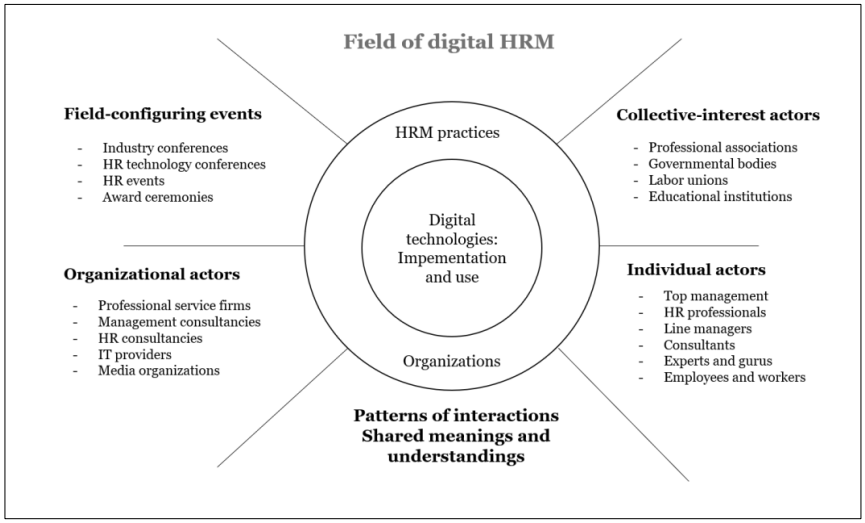


Figure 3. Conceptualization of the field of digital HRM

As explained in Chapter 2, digital technologies, their implementation, and their use are at the heart of the field of digital HRM. The impact of digital technologies on HRM practices and organizations is also central in the field of digital

HRM. Another key aspect of the field of digital HRM is that it comprises a community of various actors such as collective-interest organizations, field-configuring events, organizations, and individuals. It should be noted that the categories of actors depicted in Figure 3 are result of a review of HRM and institutional research (e.g., Bondarouk & Brewster, 2016; Bondarouk et al., 2017; Farndale & Brewster, 2005; Garud, 2008; Greenwood et al., 2002; Lampel & Meyer, 2008; Marler et al., 2016; Pohler & Willness, 2014), and they are not identical to actors identified in the field of digital HRM on Twitter in Chapter 4. In this dissertation, I focus on how various actors discuss and perceive digital technologies and their impact on HRM through their social-media interactions and discourse on Twitter. In turn, the analysis of these interactions and discourse lead to the development of patterns of interactions and shared meanings and understandings about digital HRM, which characterize the identified field of digital HRM on Twitter. In what follows, I present the most pertinent definitions of fields developed and used by institutional theorists.

One of the first definitions of fields is that of DiMaggio and Powell (1983). According to their definition, fields comprise "those organizations that, in the aggregate, constitute a recognized area of institutional life: key suppliers, resource and product consumers, regulatory agencies, and other organizations that produce similar services or products" (DiMaggio and Powell, 1983: 148). This definition highlights the relational nature of fields and underscores the importance of products and technologies in driving field emergence and formation.

On the other hand, Scott (1995) defines a field as a community of individual and organizational actors who "partake of a common meaning system, and whose participants interact more frequently and fatefully with one another than with actors outside the field" (p. 56). In contrast to the previous definition, this one emphasizes the significance of discourse in the formation and development of fields. In line with this definition, more recent studies propose that a field forms around a shared concern and that the negotiation of meanings is a critical component (Hoffman, 1999). More specifically, a field forms around a "central issue – such as the protection of the natural environment – rather than a central technology or market which introduces the idea that fields become centers of debates in which competing interests negotiate over issue interpretation" (Hoffman, 1999: 391).

Fligstein and McAdam (2011) introduce the concept of strategic action fields, which they define as a "social order where actors (who can be individual or collective) interact with knowledge of one another under a set of common understandings about the purposes of the field, the relationships in the field (including who has power and why), and the field's rules" (p. 3). This definition of fields assumes a level of intentionality and shared knowledge among field participants. However, in the early stages of field formation, ambiguity and uncertainty may prevail, making this assumption less applicable. More recently, Coraiola, Suddaby, and Foster (2018) added a temporal dimension to the definition of fields, suggesting that fields are a "temporary collective arrangement

of actors dragged together by an attention vortex created by environmental jolts and field-configuring events" (p. 48).

What emerges from the various definitions of fields is the presence of both structural or spatial and cognitive or meaning elements (Coraiola, Suddaby, & Foster, 2018). Traditionally, the geographical location of field actors has been considered a crucial aspect of fields (e.g., Warren, 1967). However, recent research has expanded understanding of fields as "relational spaces", where physical proximity is not a necessary condition for their emergence, evolution, or boundary expansion (Wooten & Hoffman, 2017: 64). This relatively new perspective recognizes that organizations can interact with others, despite being located far apart, and that their interactions can be significant and consequential. It is worth noting that the geographical location of organizational ties may not necessarily correspond to the frequency or importance of interactions, as shown, for example, by the relationships between headquarters and subsidiaries, or organizations and government agencies (Scott, 2014).

This relational perspective highlights the structural components of a field and typically suggests a network representation of fields (Scott, 2014; DiMaggio & Powell, 1983; Powell & Oberg, 2017). In this dissertation, I examine the relational structure of the field of digital HRM on Twitter through the social-media interactions of its actors. More specifically, in Essay 2 I identify the various roles that central actors play in the field based on the flow of information. Through this lens, assessing the subject positions of actors within their fields enables analysis of their influence and agency. Research has demonstrated that field actors can either occupy central or peripheral positions (Cattani et al., 2014; Zietsma et al., 2017). Central actors, who posess a high status, are well-positioned to exert significant influence over the field, ultimately dictating whether to maintain stability or introduce change (Zietsma et al., 2017). Although these actors tend to resist transformation to avoid losing their dominance, they are also more inclined to implement innovations of technological, social, or market nature to augment or reinforce their centrality (ibid.). In contrast, peripheral actors are more prone to introduce technological innovations since they have less to lose (ibid.). However, their primary challenge rests in their ability to compete with high-status actors given the constraints potentially imposed by their resources and capabilities (Zietsma et al., 2017). In this dissertation, I focus on identifying central actors in the field of digital HRM on Twitter through their retweet interactions which represent the flow of information in the field. On the other hand, identification of peripheral actors is outside the scope of this research.

The second element that distinguishes fields concerns the development of a common meaning system that enables actors to comprehend an issue of interest and guide their actions (Scott, 1995; Coraiola et al., 2018). To that end, in Essay 3 I examine the social-media discourse produced by the field actors and identify discursive practices that these actors use as they try to create meanings of digital HRM on Twitter. The emphasis on a common meaning system highlights the significance of discourse within the field and the "shared frames and narratives that lie at the base of collective action" (Coraiola, Suddaby, & Foster, 2018: 49).

Discourse, rhetoric, framing, and interactions are the main sources of creating meanings in fields (Leibel et al., 2018). More specifically, the shared meanings are expressed through the language used by the actors, which involves a vocabulary of motives (Mills, 1940) and certain types of repeated actions (Berger & Luckmann, 1967). Although it is not investigated in this research, it should be noted that fields are described by distinct field logics, commonly referred to as institutional logics (Thornton, 2004) that concern the organizing principles of a field. These principles are formal and informal rules of action and interaction, guiding or restricting actors' behaviour in a particular field and determining the appropriateness of action in a particular context at a given time (Thornton, 2004).

Fields comprise multiple communities of organizational and individual actors (DiMaggio & Powell, 1983; Grodal, 2018). Establishing the boundaries of a field is a challenging and "arbritary process in our highly interconnected social worlds" (Scott, 2014: 232). Research usually distinguishes between social and symbolic boundaries (Lamont & Molnar, 2002; Wry, Lounsbury & Glynn, 2011; Grodal, 2018). The symbolic boundaries of fields are created through the efforts of actors to understand its meanings with the aim being to agree on a collective identity and distinctive characteristics (Lamont & Molnar, 2002; Wry, Lounsbury & Glynn, 2011; Glynn, 2008; Grodal, 2018). On the other hand, social boundaries concern the ability of actors to gain access to the financial and cultural resources of the field (Wry, Lounsbury & Glynn, 2011; Zietsma & Lawrence, 2010). Cultural resources include, for example, legitimacy, status, and visibility that actors can use to promote their own agenda and interests (Grodal, 2018). Moreover, as Grodal (2018) emphasized cultural resources are contextual. For example, in the context of social media, membership in the field of digital HRM could provide visibility and recognition as an influential actor relating to digital HRM.

3.3 Digital fields: Bringing social-media communication to fields

In this dissertation, I propose that the concept of "digital field" is a valuable theoretical and methodological tool for investigating the formation and development of institutional fields within the context of social media. Specifically, the notion of "digital field" refers to a field that forms around a specific issue such as digital HRM within the context of social media. Building on previous research on fields, I define digital fields as a temporary arrangement of individual and organizational actors brought together because of increasing attention on an issue; such actors interact frequently and actively participate in shaping meanings around the issue in question (DiMaggio & Powell, 1983; Scott, 1995; Hoffman, 1999; Coraiola et al., 2018).

Figure 4 illustrates the relationship between institutional fields and digital fields. More specifically, digital fields influence and are influenced by what is happening in the physical space; in this case, the issue of digital HRM as perceived by various actors and their activities in different contexts such as organizations and countries. Like institutional fields (DiMaggio & Powell, 1983; Scott,

1995), I put forth that digital fields comprise multiple communities and are defined by their relational structure and discursive practices for creating meanings. In turn, social-media interactions and social-media discourse shape the structure and meanings of the digital field of digital HRM on Twitter. It is important to note that actors comprising the institutional field in a physical space may not be the same as actors populating the digital field. As pointed out, social-media platforms allow a plurality of voices to become visible and heard (Etter et al., 2019; Meyer & Vaara, 2020), thereby giving the opportunity to new types of actors such as bloggers to influence the structure and meanings of a digital field. It is also worth noting that various overlapping digital fields may be formed around the same issue within a social-media context making their boundaries more porous as opposed to physical spaces (Powell et al., 2017).

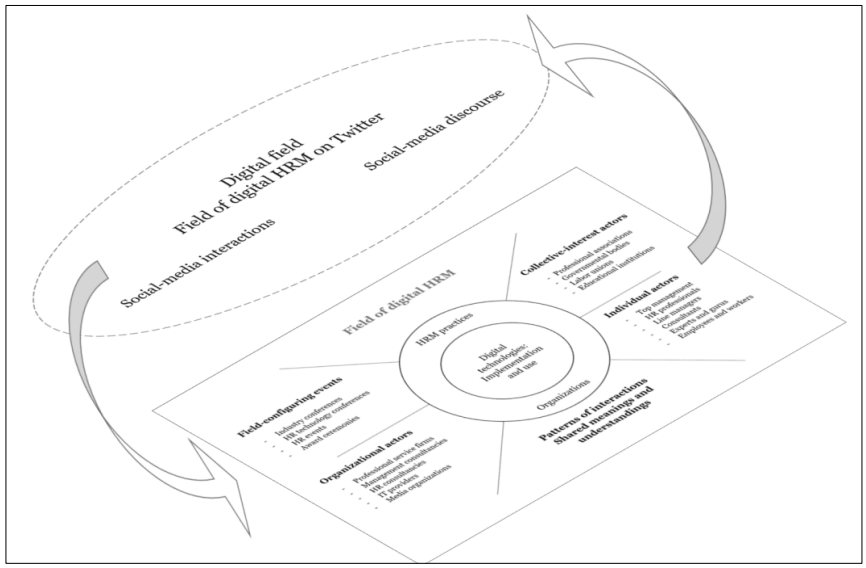


Figure 4. Conceptualization of digital fields

In the following, I present relevant changes that social media have brought and describe how previous research has examined the formation and development of fields in the context of social media.

It is well recognized that the emergence of digital technologies and the Internet has altered the ways individuals and organizations interact and communicate with each other. More specifically, social-media platforms offer a means of comparing semantic, relational, and behavioral interactions (Powell & Oberg, 2017). These platforms also have a global reach, facilitating amplification of diverse voices while also potentially silencing others (Etter, Ravasi & Colleoni, 2019; Gümüsay, Raynard, Albu, Etter, & Roulet, 2022). Furthermore, social media are associated with high transferability of ideas and practices, but are often limited in their durability (Jones, Meyer, Jancsary & Höllerer, 2017). Such changes in communication and interactions in social life have the potential to influence the development of institutional fields in the context of social media. As a result, digital fields, referring to fields that form and develop in the social-media context, have become important spaces for social status production and

collective meaning-making (Levina & Arriaga, 2014; Lindell, 2017; Serino, 2021).

Furthermore, while visibility and voice in institutional processes were previously associated with the actions of large and powerful actors, meaning those with extensive financial and other resources, high status and positions of authority, social media have changed the rules of actor participation (Etter, Ravasi, & Colleoni, 2019; Gümüsay, Raynard, Albu, Etter, & Roulet, 2022), at least to some extent. For example, social media have opened up opportunities for marginalized actors, including bloggers skilled in social-media communication, to influence institutional fields (Powell, Oberg, Korff, Oelberger, & Kloos, 2017; Meyer & Vaara, 2020). Despite the democratizing potential of social media, it is important to acknowledge that not all actors can take advantage of social media platforms equally. Access to certain platforms, the ability to attract attention to one's posts, and posting frequency all play a role in determining an actor's impact on the institutional field (Gümüsay, Raynard, Albu, Etter, & Roulet, 2022). Moreover, it should be noted that social-media users engage in an "online performance" (Papacharissi, 2012), which enables construction and enactment of their preferred individual, social, and organizational identities while managing relationships between various social groups (Etter, Ravasi & Colleoni, 2019). This means that social-media users have the agency to control their public visibility by choosing what to discuss and how to present their personal and professional interests.

Recent studies have shown that boundaries are not as fixed and stable as previously thought suggesting that advances in digital technology have also played a role in blurring the boundaries of fields (Powell et al., 2017). More specifically, the availability of digital platforms and tools has enabled organizations to form and maintain connections with actors from different fields, thus making the boundaries of fields more porous and permeable (Powell et al., 2017). This means that establishing the boundaries and consequently the meanings and identity of a digital field are complex and multi-layered processes. In Essay 2, I tap into this issue and offer some initial evidence and pointers for future research.

Previous research on digital fields (Levina & Arriaga, 2014; Lindell, 2017) applied Bourdieu's field theory (Bourdieu, 1977, 1986, 1989) to examine the formation and development of fields in the context of social media. More specifically, Levina and Arriaga (2014: 477) define digital fields[2] as "social spaces engaging agents in producing, evaluating, and consuming content online that is held together by a shared interest and a set power relations among agents sharing this interest." This definition highlights that fields in the social-media context are established around an issue or a shared interest for which they actively create, react, and consume online content. In line with Bourdieu's approach, power relations among actors play an important role in the formation and development of digital fields.

[2] Levina and Arriaga (2014) adopt the term of online fields to describe the formation of fields in the context of social media.

Bourdieu's field theory considers that dominant actors or groups impose their power over the dominated groups. In the main, dominant actors derive their power from the physical (or economic), social, human, and cultural capital they bring to the field (Bourdieu 1986, 1989). The position of actors in a given field depends on the amount and form of their capital, and actors with similar amounts and types of capital tend to assume similar positions in the field (Kluttz & Fligstein, 2016). In a given field, actors use their capital to enhance or sustain their field positions, while the field serves as the site where they exert power over others depending on the resources available to them (ibid.). Moreover, relations in Bourdieu's fields are typically hierarchical, with dominant actors exerting their power over dominated ones due to their ability to define what is important in the field (Kluttz & Fligstein, 2016). Although I do not explicitly examine the power relations in the field of digital HRM on Twitter, I provide some indications of how power manifests in the social-media context in the two empirical essays.

4. Methodology

4.1 The research approach

This research was motivated by my interest in exploring the potential influence of online data on the study of organizational and HRM phenomena. In Essay 1 we conducted a methodological review to demonstrate the potential added value of online data in examining HRM phenomena. Following this, I proceeded to the empirical component of this dissertation, which centers on investigating the development of an institutional field of digital HRM within the context of social media.

Initially, I collected Twitter data from two globally recognized HR professional associations and two HR technology conferences. This data served as the basis for examining how these actors perceived and discussed the effects of HRM digitalization online. Subsequently, I leveraged the connectivity affordances on Twitter such as the following-follower relationship (e.g., Vathi et al., 2015; Vathi et al., 2017) and consulted prior research on the use of online data in organizational studies (e.g., Powell et al., 2017) to broaden the scope of the data collection process. Through this process, I identified a community of individual and organizational actors who were actively discussing the issue of digital HRM. A detailed account of this process is presented in section 4.4.1 of this dissertation.

This approach led to the identification of 473 individual and organizational actors who comprised the field around the issue of digital HRM on Twitter. The goal was to incorporate a plurality of actors and voices into the study of digital HRM, thereby enabling a deeper exploration of perceptions, beliefs, opinions, and meanings concerning digital HRM. Using social-media data, I advance understanding of digital HRM and contribute to existing literature in the field of HRM.

The Twitter dataset used in this study comprised 818,302 tweets and retweets, including text-based content in the form of tweets as well as interactions in the form of retweets, i.e., resharing posts. Following an inductive analytical approach, I used machine learning methods to analyze this large dataset. More specifically, I employed author-topic modeling (Rosen-Zvi et al., 2010) to code the text data in a manner that does not involve imposition of pre-selected codes or dictionaries by the researcher. This facilitated generation of a comprehensive overview of the data, while also enabling me to zoom in on specific topics for detailed investigation. In addition, I analyzed the retweet interactions with social network analysis techniques (Wasserman & Faust, 1994).

To develop the research question of "*How does an institutional field of digital HRM develop within the context of social media?",* I followed an iterative process which involved investigating the data from various theoretical perspectives such as management fashions (e.g., Abrahamson, 1996; Perkmann & Spicer, 2008), proto-institutions (e.g., Lawrence et al., 2002; Zietsma & McKnight, 2009; Smolka & Heugens, 2020), and institutional work (e.g., Lawrence & Suddaby, 2006; Lawrence & Phillips, 2019), However, I concluded that the data better described the development of a digital field around the issue of digital HRM which was established through its relational structure (Scott, 2014) and discursive practices for creating meanings (Leibel et al., 2018). The relational structure is operationalized through the retweet interactions of field actors which, in turn, show the flow of information in the field. The discursive practices were examined through analysis of the social-media discourse that field actors produced, i.e., through their tweeting. The relational structure and discursive practices are further explored in Essays 2 and 3.

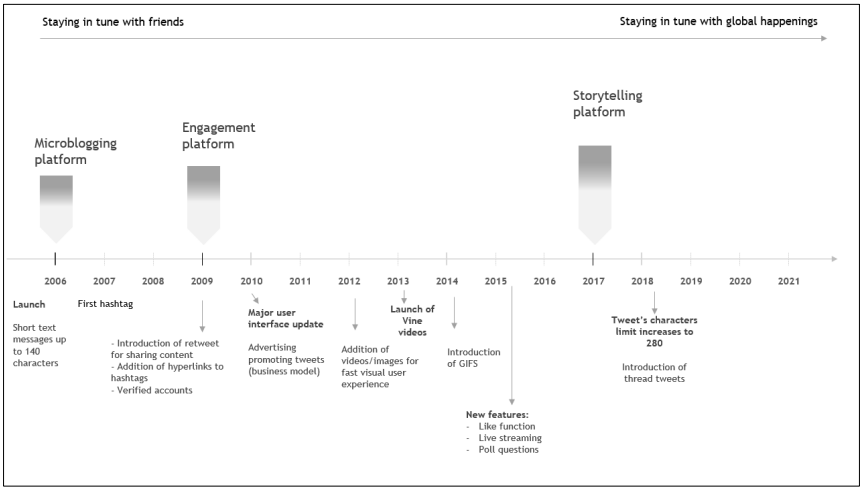
In this dissertation, I adopted an inductive research approach that uses unsupervised machine learning methods, including social network analysis (e.g., Wasserman & Faust, 1994) and author-topic modeling (Rosen-Zvi et al., 2010). Unsupervised machine learning is commonly used to reveal hidden patterns and structures in complex or multidimensional data without relying on pre-defined labels (Leavitt et al., 2021). Thus, such methods serve inductive purposes, as they provide researchers with the opportunity to uncover previously hidden structures or patterns in relationships that underlie social phenomena (Leavitt et al., 2021). Despite the traditional association of inductive research with qualitative methods (e.g., Pratt, 2009), quantitative approaches are also possible (Wood & Welch, 2010). In the context of big data, unsupervised machine learning represents a natural extension of these approaches. (Leavitt et al., 2021). Two common applications of unsupervised machine learning that demonstrate this inductive nature are clustering problems that group individual observations into clusters based on similarity such as social network analysis, and dimensionality reduction problems that reduce the number of variables in large data sets to simplify further analyses such as topic modeling (Leavitt et al., 2021).

4.2 Research setting: Twitter as a digital discursive space

Twitter is one of the most recognized social-media platforms that has been widely discussed for its ability to serve as a platform for social and political debates as well as professional discussions. For example, we have seen the emergence of social movements such as #MeToo (e.g., Hosterman et al., 2018; Xiong et al., 2019) and #BlackLivesMatter (e.g., Ray et al., 2017; Tillery, 2019), as well as an expression of organizational criticism through cancel culture. As a global platform, Twitter "enables people to consume, create, distribute, and discover content and has democratized content creation and distribution" (Twitter, 2020). In this dissertation I conceptualize Twitter as a digital discursive space, "governed by different rules and understandings regarding text production, distribution, and consumption" (Hardy & Maguire, 2010: 1365). In this regard,

Twitter serves as digital space in which people and organizations generate discourse, which is shaped by context-specific practices, technical features, and social relations.

Initially launched in 2006 as a microblogging platform resembling short mobile phone messages, Twitter has since undergone a significant transformation[3] in its features and aligned its business model with the real usage patterns of its users. For instance, the retweet feature was introduced in 2009 in response to a desire on the part of users to share content with other users. While Twitter's original intent was to provide a platform for individuals to remain connected and engage in conversations with friends and acquaintances, it has since shifted its focus to capturing "what's happening in the world and what people talk about now" (Twitter, 2020). Twitter is used to communicate and express thoughts and opinions through short messages, commonly known as "tweets." Tweets were originally limited to 140 characters but have since been expanded to 280 characters, allowing for more comprehensive messaging and narrative possibilities. During the period of the study, Twitter allowed its users to post tweets with only 140 characters. Figure 5 illustrates the changes in Twitter's platform features and overall purpose as it has evolved from a microblogging platform to an engagement platform during its growth and ultimately to a storytelling platform.



[3] Twitter has undergone another significant transformation in October 2022 when it was acquired by X Corp. As part of its transformation, Twitter has been rebranded to X in July 2023 which, according to Elon Musk, current owner of Twitter, and Twitter's executives, aimed to reflect its ongoing changes to become an application that could do everything, from communicating with others to performing financial transactions (e.g., Ivanova, 2023). Although Elon Musk has claimed that one of his goals with Twitter was to ensure freedom of speech, this has generated controversy among its users fearing that it will become an arena for alt-right rhetoric. The outcome of these changes and future of Twitter is still unknown, as of August 2023. However, it is important to note that in this dissertation I treat and contextualize Twitter based on its operations and technical features up until the end of data collection, i.e., February 2018. During that time, Twitter was one of the most recognized and widely used social-media platforms for discussions on various social, political, organizational and professional issues.

Figure 5. Twitter timeline (created based on information gathered from Twitter, 2020 and my own interpretation)

Twitter's significance as a digital discursive space for social interactions derives from its technological affordances, which allow individuals and organizations with relatively limited power and authority to engage in ongoing public debates (e.g., Gümüsay, Raynard, Albu, Etter, & Roulet, 2022). These affordances include the ability to create content by posting messages (tweets), use hashtags (#) to attract attention, share information by reposting other users' messages (retweets, RTs), participate in discussions by mentioning other users (@User_X), and reinforce opinions with liking messages (favorites, <3). To illustrate, Figure 6 shows the appearance of a Twitter account's biography section (Figure 6a), as well as that of a tweet (Figure 6b) and a retweet (Figure 6c) on the platform. These examples are taken from the dissertation author's Twitter account and include text and links to external sources. Moreover, tweets and retweets may also include other objects such as pictures, videos, and emojis. However, examination of such material objects lies outside the scope of this dissertation. As a digital discursive space, Twitter is also a site of contestation where diverse and competing groups of actors seek to establish their own definitions of key problems and possible solutions (Jacobs, Kemeny & Manzi, 2003), based on their interests and agendas.

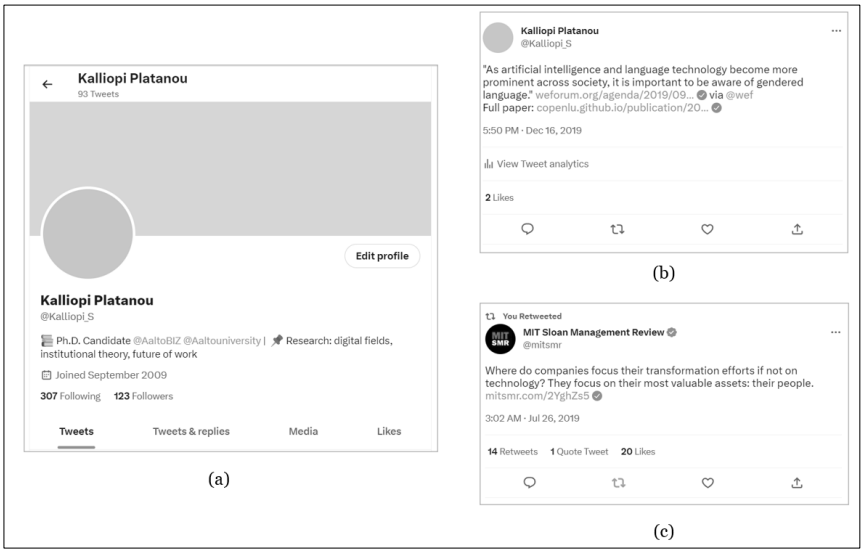


Figure 6. Twitter's biography section, tweets, and retweets features (examples from the author of this dissertation)

To further contextualize Twitter as the empirical setting of this dissertation, I delve into the demographics of Twitter users as described by recent global reports. According to Statista's (2022b) reports, as of January 2022, the United States exhibited the largest Twitter user base with 76.9 million users, followed

by Japan with 58.95 million, India with 23.6 million, Brazil with 19.05 million, Indonesia with 18.45 million, and the United Kingdom with 18.4 million.

With regard to age groups, Statista (2022a) reports that 38.5 percent of Twitter users fall within the 25–34-year-old bracket, while 37.8 percent of users are over the age of 35. In comparison to other popular social-media platforms such as TikTok and Instagram, Twitter's users are overall older. Furthermore, research conducted in the United States has revealed that adult Twitter users are more likely to have a college degree and higher household income than the general population of the country (Smith & Anderson, 2018). Specifically, Pew Research Center (2018) found that 42 percent of adult Twitter users in the US hold at least a bachelor's degree (Smith & Anderson, 2018).

Research has also indicated that Twitter serves as a source of information about current events for individuals, with 69 percent of users using the platform to access news and updates (Auxier & Anderson, 2021). Moreover, a significant proportion of these individuals (57%) have reported that discussions on Twitter have deepened their understanding of current events (Auxier & Anderson, 2021). In addition, corporate leaders have recognized the potential of Twitter as a means of shaping their public image and that of their organizations (Malhotra & Malhotra, 2015). CEOs leverage the platform to disseminate business-related information, share links to relevant news and events, engage in self-promotion, and communicate on a broad range of topics (Malhotra & Malhotra, 2015). By so doing, they are able to establish a strong digital presence and shape their public image.

4.3 The research process and data collection

In the following section, I describe the process of data collection, starting with the construction and composition of digital field boundaries. Next, I present the empirical material and analytical strategies used in this dissertation. It is important to note that the data were collected in a large-scale project titled "Brave New HR," which was funded by the Academy of Finland (No. 298225).

4.3.1 Data sampling: establishing the boundaries of the digital field

To establish the boundaries of the digital field on Twitter, it was important to identify a group of active core participants that had an interest in digital HRM. To accomplish this, I drew upon prior research in the areas of organizational and professional fields, where professional associations and industry conferences, referred to as "field-configuring events," were identified as key actors in shaping an institutional field. These actors have the potential to produce institutional effects such as changes in institutional norms or practices within their respective fields (Greenwood et al., 2002; Lampel & Meyer, 2008; Hardy & Maguire, 2010; Schüssler et al., 2014).

Professional associations play a crucial role in creating collective beliefs and practices by offering membership opportunities and by facilitating professional training programs, certifications, and annual meetings and events (Greenwood

et al., 2002). On the other hand, field-configuring events are defined as "temporary social organizations ... in which people from diverse organizations and with diverse purposes assemble periodically, or on a one-time basis" (Lampel & Meyer, 2008:1026). Furthermore, Garud (2008) emphasizes that field-configuring events function as venues for the emergence of fields, as well as arenas for building consensus within a field.

The original list of the core participants involved in the discourse around digital HRM comprised five Twitter accounts. These accounts represented two distinct HR professional associations, two HR technology industry conferences, and one account related to a variety of events linked to one of the professional associations. The inclusion of the latter account was motivated by my intention to examine how a general HR event account might tackle the issue of digital HRM and assess the extent of their engagement with the issue.

The selected HR professional associations occupy a dominant position in the global HRM field. They are renowned for their influential role in shaping the field by offering guidance through HR professional maps and standards and professional development opportunities such as certificates and courses and by conducting research studies. At the time of this study, the two professional associations had approximately 141,000 and 101,000 Twitter followers respectively. The choice of the two HR technology industry conferences was based on their popularity among practitioners, as evidenced by their frequent mention in various blogs and LinkedIn posts. Moreover, their followers on the Twitter platform, approximately 20,000 and 11,000, further emphasize their popularity. The account representing various HR events associated with one of the professional associations had approximately 26,000 followers. The content of the selected industry conferences also covers a wide range of digital HRM topics, indicating a comprehensive discussion beyond the specific HRM functions and practices.

To establish a digital field around the issue of digital HRM on Twitter, I conducted an examination of the followers of the five initial accounts. This involved identification of users who followed all five accounts and a subsequent evaluation of their relevance to the digital HRM discourse. The theoretical significance of this examination lies in the assumption that the accounts following the initial list of core participants are more likely to share an interest and concern about the digital HRM issue (e.g., Vathi et al., 2015; Vathi et al., 2017). Ultimately, 598 Twitter accounts followed the initial five, which were then filtered to 518 accounts after excluding accounts that posted over 90 percent of their tweets in languages other than English. Then, I conducted a qualitative evaluation of the remaining accounts to determine their relevance to the digital HRM discourse. This resulted in the removal of eight accounts due to irrelevant or inappropriate content, leaving me with 500 actors who followed the five core participants on Twitter.

At the same time, in February 2018 I used the Standard Twitter Application Programming Interface (API) to collect the 3,200 most recent tweets from each user's timeline and then subjected the collected data to several rounds of exploratory analysis using topic modeling (Blei et al., 2003) and network analysis

(Wasserman & Faust, 1994). These analyses quickly showed the crucial role of the identities of the actors in understanding their actions and in further theorizing the findings presented in Essays 2 and 3. To this end, in September 2019, I manually reviewed the biography sections of the Twitter accounts and classified them into distinct groups such as professionals, top management, and professional service firms. It is noteworthy that this classification revealed that 42 accounts had been deleted. In accordance with Twitter's terms of service and privacy policy, the data associated with these accounts were removed. Importantly, the deletion of these accounts did not significantly affect the sample's composition since they were distributed across all categories. Thus, the final sample for the digital field consisted of 473 Twitter accounts, comprising the initial five accounts and the 468 common followers from the initial list.

4.3.2 Limitations of data sampling from Twitter

Sampling biases present a significant challenge for researchers at the intersection machine learning and social sciences fields. Recently, Grimmer, Roberts, and Stewart (2022) have identified several sampling biases related representativeness that researchers must consider when collecting and analyzing text data. In the following, I discuss the four different sampling biases that they have identified, namely resource bias, incentive bias, medium bias, and retrieval bias (Grimmer, Roberts, & Stewart, 2022).

Resource bias posits that texts tend to better reflect populations with greater resources for producing, recording, and storing documents (Grimmer, Roberts & Stewart, 2022). When access limitations prevent certain segments of the population from being represented, such as those who are illiterate and/or have limited access to the Internet, this bias can become even more pronounced (ibid.). Moreover, the cost associated with generating documents can increase the resource bias by making it challenging to store historical data from less privileged populations (Grimmer, Roberts, & Stewart, 2022).

Incentive or positivity bias is another sampling bias that researchers need to consider, as it arises when "incentives and strategic behavior drive the production and retention of documents" (Grimmer, Roberts, & Stewart, 2022: 43). Individuals and organizations typically want to portray themselves in the most positive way (Salganik, 2017) and as such they may avoid posting messages that would present a negative aspect of their lives or organizational processes. Hence, this bias may result in gathering social-media data that suffer from social desirability bias (Salaganik, 2017) that capture only the most positive or idealized portrayals of people and events (Grimmer, Roberts, & Stewart, 2022).

The medium bias is yet another sampling bias that researchers need to consider, as "the technologies and types of media in which texts are recorded" can significantly influence the content reflected in them (Grimmer, Roberts, & Stewart, 2022: 44). For example, on Twitter during the study period, individuals and organizations could only post messages with 140 characters which have a great impact on the type of content that actors could create. Furthermore, social-media users can incorporate images, videos, and live streams that alter the role of

accompanying text. Hence, when examining text analysis in social media, researchers must also consider the role of various objects that are part of the data such as links, pictures, and videos (Grimmer, Roberts, & Stewart, 2022). Thus, the medium through which the data have been collected capture different type of cultures leading to a bias towards platform-specific language and expressions, (e.g., hashtags on Twitter) (Grimmer, Roberts, & Stewart, 2022)

Retrieval bias is another sampling bias that can affect the data collection. This bias can arise when texts are selected using statistical methods, with "data access through APIs or other search functions," and when a "transparent underlying process for translating search queries into results" (Grimmer, Roberts, & Stewart, 2022: 45) is lacking. It is also possible that certain systems will provide only a random selection of relevant documents or only the most relevant ones (Grimmer, Roberts, & Stewart, 2022). For instance, the Standard Twitter API allowed the collection of only the 3,200 most recent tweets of each user which might lead to an incomplete data collection (Salganik, 2017). Thus, the representativeness and reliability of data collection process due to limited access to documents might affect the answer to certain research questions (Grimmer, Roberts, & Stewart, 2022).

Upon careful reflection of the potential biases that may have affected this study, it is important to acknowledge the limitations of this dissertation in gathering data from Twitter. One such bias is the resource bias, as access to Twitter is restricted in certain countries (e.g., China and Russia), thereby hindering full comprehension of digital HRM on a global scale. Nonetheless, the restriction of the sample to English-speaking accounts may mitigate this issue. Given the performative nature of social interaction (Goffmann, 1959), it is crucial to consider the incentive or positivity bias that may have led actors in the digital field to emphasize the positive aspects of digital HRM in order to promote their organizations and themselves as experts in the field. Moreover, the medium bias may have influenced the formation of the digital field, as the unique constraints and opportunities of the platform may have affected the structure and meanings associated with digital HRM. For example, Twitter's 140-character limit may have influenced the specific vocabulary used by actors, including buzzwords like HR analytics and artificial intelligence. Moreover, retrieval bias is another important consideration, particularly when using APIs to gather data. The Standard Twitter API employed in this study permitted the collection of only the 3,200 most recent tweets, which may have led to exclusion of some users' tweets. Despite these biases, the study's findings were analyzed thoroughly, and their generalizability was thoughtfully considered.

4.3.3 Actors in the digital field

In this section, I analyze the demographic characteristics of actors in the digital field around the issue of digital HRM. Existing research has shown that digital technologies have made field boundaries more porous, thereby inviting a plurality of individual and organizational actors to discuss issues of concern (Powell et al., 2017). This phenomenon is also evident in the field of digital HRM on Twitter. To assess the diversity of actors in the digital field, I categorized each

account according to various key attributes, including the actor type (macro-level, organization, or individual), location (country and continent), and, when relevant, the organization's size based on employee count. The categorization procedure was conducted meticulously, ensuring meaningful categories and subcategories that would facilitate the data analysis and theory development. To obtain the necessary information, I examined the Twitter accounts, evaluated the information in the biography section, and, when needed, visited the users' LinkedIn pages and/or personal/organizational websites listed in the biography section. For some organizational accounts, I performed a Google search to gain a better understanding and categorize the industry to which they belonged.

The digital field identified in this study is relatively heterogeneous, as is evident from the data presented in Table 1. Specifically, I found that organizational actors accounted for 45 percent of the 473 actors included in the analysis. Individual actors occupying various professional statuses and functions also accounted for 45 percent. Macro-level actors, on the other hand, constituted a small proportion of 3%. For the remaining 7% of actors, I could not classify them into to any category due to insufficient information regarding their identity.

Table 1. Actors in the digital field

Actor category	Count	Sub-category 1	Sub-category 2	Number of accounts (n= 473)
Macro-level actors	13			
		Professional associations	HR professional associations	3
			Other professional associations	1
		Field-configuring events	HR conferences	8
			Non-HR conferences	1
		Other collective interest organizations	Educational institution	1
Organizational actors	215			
		Professional service firms	IT vendors	100
			HR consultancy firms	63
			Management consultancy firms	11
			Marketing consultancy firms	4
			Other professional service firms	8
		Informal networks	HR networks	8
			HR websites and blogs	13

			Non-HR networks and sites	3
		Other businesses		5
Individual actors	213			
		Top management	C-level	21
			HR Directors and Executives	12
			Marketing Directors and Executives	10
			Other Directors and Executives	10
		Managers and Leaders	HR Managers and Leaders	24
			Marketing Managers and Leaders	15
			Other Managers and Leaders	9
		Professionals	HR professionals	29
			Marketing professionals	8
			Other professionals	1
		Consultants	HR consultants	19
			Management consultants	11
			Business psychologists and coaches	10
		Entrepreneurs and founders		12
		Authors and speakers		6
		Other individual actors		16
Non-identifiable actors*	31			31

*These actors are not identifiable because there was no information in the biography section on their Twitter account.

'Professional service firms,' including 'IT vendors', 'HR consultancy firms', and 'Management consultancy firms', are the most dominant type of organizational actors in the digital field, comprising 39 percent of the sample. The presence of these firms in the field of digital HRM is unsurprising, given their active involvement in providing software and guidance for adoption of new digital technologies. Meanwhile, 'informal networks' such as 'HR websites and blogs' and 'HR networks' constitute a relatively small fraction (5%) of the organizational actors in the digital field. Nonetheless, they serve as crucial sources of up-to-date news and trends related to digital HRM and also provide an online space for discussion and opinion-sharing among HR and business practitioners.

An examination of the individual actors revealed that a diverse range of professional roles are represented in the digital field around the issue of digital HRM. The largest category of individual actors comprises those in 'top management' positions, who account for 11 percent of the sample. 'Managers and leaders' made up 10 percent of the actors with 'professionals' and 'consultants' comprising 8 percent each. 'Entrepreneurs and founders' accounted for three percent of the sample, while 'authors and speakers' made up just one percent. A further four percent of the actors were classified as 'other individual actors.' The results of this categorization underline the varied roles and functions that individuals undertake in the digital field and their potential to shape the field. Notably, the actor categorization suggests that HR and marketing management positions have significant potential for influencing the professional boundaries of the digital field. To reflect this, I expanded the subcategories of group actors to include these positions.

Through the categorization of the macro-level actors in the digital field, I identified 13 'collective-interest organizations' such as 'professional associations' and 'field-configuring events.' In addition to the initial field-configuring events, the sample consisted of six other HR events that highlighted the importance of such events in creating meanings in digital fields. Although social media may be less preferred by collective-interest organizations such as professional associations and educational institutes, the diverse range of actors identified suggests that they play a crucial role in current discussions on digital HRM by providing a virtual space for practitioners and service providers to form a community and exchange information.

The field of digital HRM on Twitter is geographically diverse, with participation from numerous countries across all continents, as illustrated in Figure 7. Nonetheless, the distribution of actors is largely skewed towards Europe (49%) and North America (19%). It is noteworthy that a considerable number of actors (13%) identify themselves as global organizations or citizens. While the analysis was restricted to accounts that primarily posted in English, this classification reveals that six percent of the actors were located in Asia and two percent in Africa.

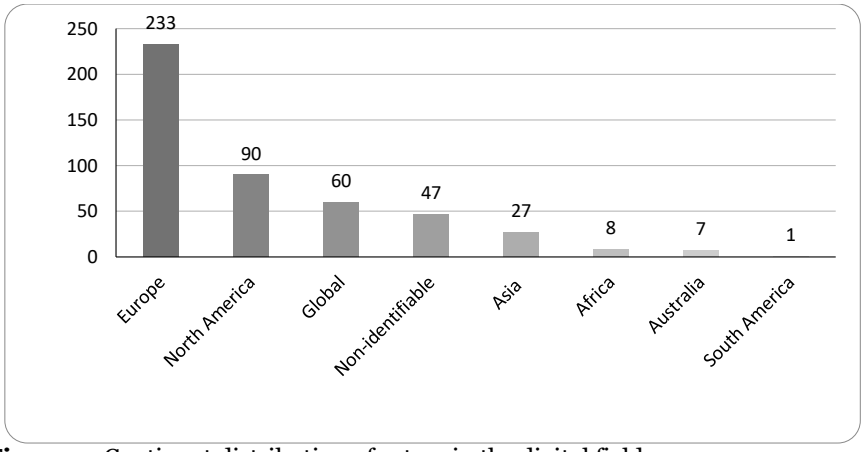


Figure 7. Continent distribution of actors in the digital field

Based on the analysis, the UK and US have the most actors in the identified digital field around the issue of digital HRM. Specifically, the UK accounted for 43 percent of the total actors, while the US contributed to 18 percent. Despite the diversity of the actors' geographic spread, only a few countries such as India, Canada, and Germany, are represented by more than five actors (i.e., 1%). The distribution of actors based on their country locations is presented in Figure 8.

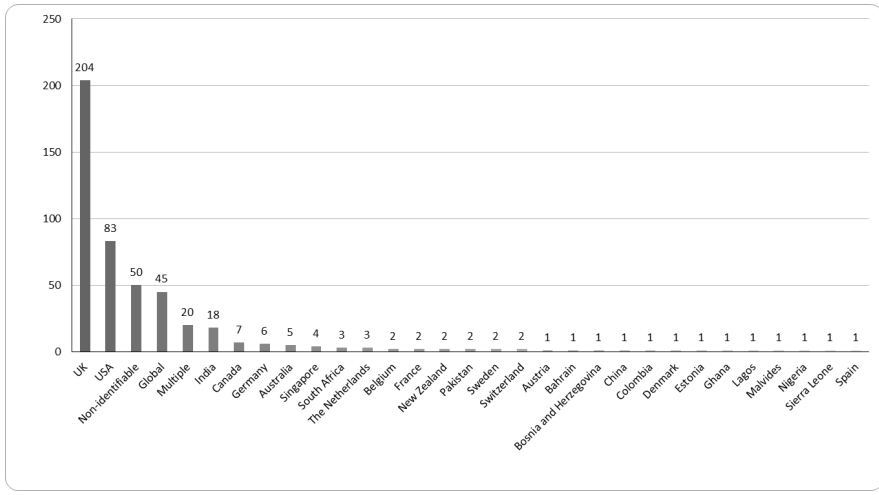


Figure 8. Country distribution of actors in the digital field

Figure 9 shows that small and medium-sized firms with fewer than 500 employees accounted for 75 percent of the sample. In contrast, large firms employing over 500 individuals comprise less than one percent of the sample. It is also noteworthy that 18 percent of the organizational accounts did not provide information on their size. It is significant that it is the small firms, which are often constrained by limited financial resources that participate actively in the digital field and drive advancements in digital HRM. This trend is also in line with their business efforts to promote new tools and products.

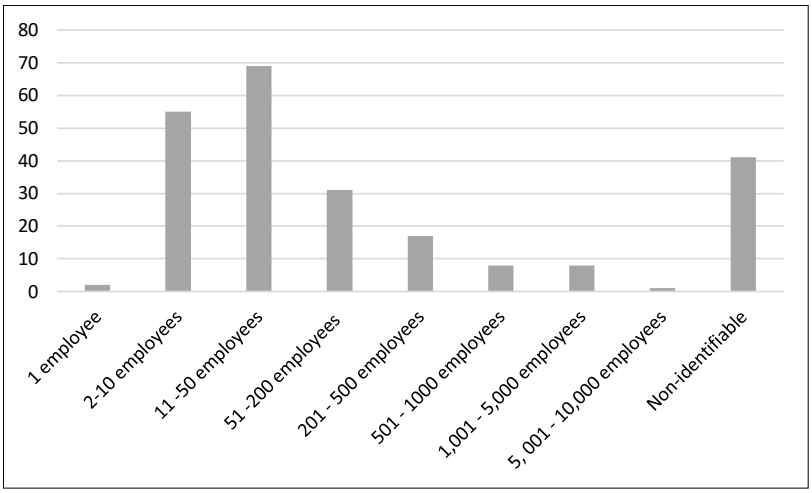


Figure 9. Organization distribution of organizational actors in the digital field

4.3.4 Empirical material

For the data collection, I extracted the 3,200 most recent tweets from each user's timeline using the Standard Twitter Application Programming Interface (API)[4]. This procedure resulted in a dataset of 818,302 tweets and retweets, comprising a total of 12,250,731 words, which is roughly equivalent to 30,763 single-spaced pages. The data were collected in February 2018, with data spanning a decade-long period from July 22, 2007, to February 27, 2018. The temporal distribution of tweets and retweets is provided in Figure 10. Notably, most tweets and retweets were observed between 2014 and 2017, which is expected, given the limitations of the Standard Twitter API. While temporal considerations are crucial to institutional theory and have been studied in the context of institutional fields (e.g., Granqvist & Gustafsson, 2016), this research did not delve into this aspect.

[4] It is worth noting that Twitter APIs limit the number of tweets that can be collected from each account. At the time of data collection in February 2018, Twitter allowed downloading and storing of only the 3,200 most recent tweets from an account.

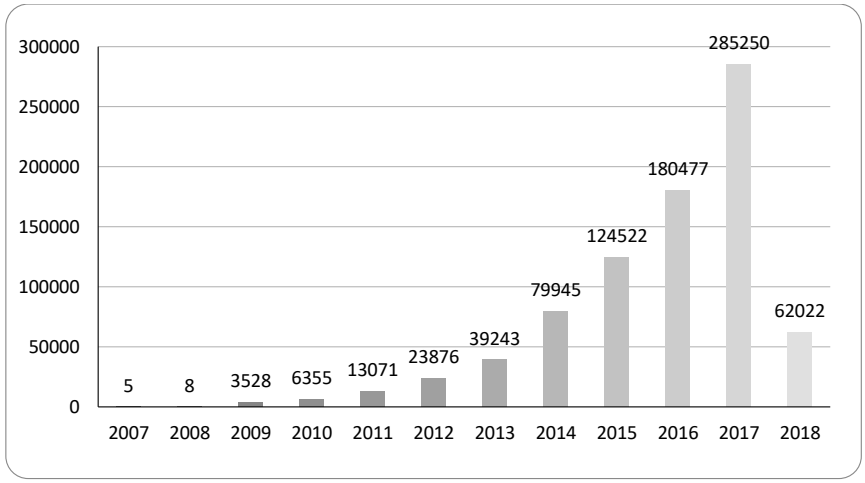


Figure 10. Temporal distribution of tweets and retweets

It is worth considering the limitations associated with data collection via the Standard Twitter API, particularly when assessing the posting activities of digital field actors. It is therefore critical to acknowledge that such actors may display varying degrees of engagement in their Twitter-based communications. Figure 11 ahows that the distribution of actors across engagement levels is relatively heterogeneous. More specifically, 228 actors were classified as highly engaged, having posted between 1,712 and 3,422 tweets. Additionally, 110 actors exhibited a medium degree of engagement, with a posting range between 572 and 1712 tweets. Finally, 135 actors displayed low engagement levels as they had posted fewer than 572 tweets.

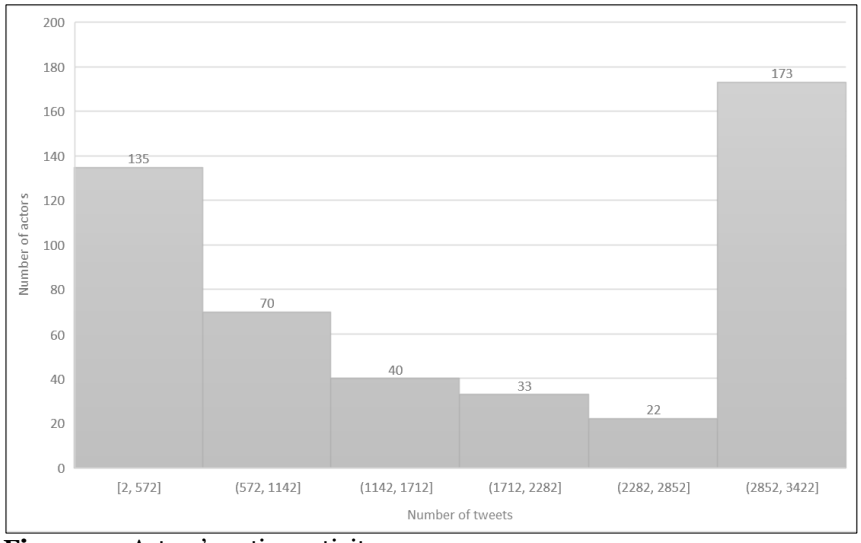


Figure 11. Actors' posting activity

While tweets can feature diverse communicative modalities, including words, images, gifs, and emojis, I focus on the language used in tweets and actors' interactions through retweeting. Retweeting means sharing content that was either written by oneself or by other users in the past and functions as a means of amplifying information within the digital field. In this study, retweets serve as a tool for operationalizing the relational structure of the digital field around the issue of digital HRM on Twitter. In Essay 2, I conducted an analysis of the number of retweets performed by the digital field actors identified in the dataset, resulting in a retweet network of 55,879 actors (nodes) and 93,626 dyadic relationships (edges).

In turn, Tables 2 and 3 provide an overview of the language adopted by the digital field actors in their tweets, revealing the top 40 words and hashtags based on their frequency in the overall collection of tweets. These words and hashtags along with their occurrences form a collective public discourse that have the potential to create meanings around digital HRM on Twitter. While the language used by the digital field actors is analyzed in Essay 3, the most frequent words presented here illustrate some significant aspects of the digital HRM issue in the digital field on Twitter. Specifically, they indicate that the meanings of digital HRM on Twitter pertain to various themes, including 1) new technologies and innovations such as artificial intelligence, people analytics, big data, and cloud systems; 2) specific HRM practices such as talent management, performance management, training, and learning; 3) the impact of technologies on business, leadership, workplace, and employee engagement; and 4) learning opportunities for the HR community such as attending HR events and technology conferences, participating in online chats, reading blogs, and sharing online materials. Thus, these frequent words and hashtags highlight the focus of the digital field actors and provide insight into the key topics and themes around the issue of digital HRM on Twitter.

Table 2. The top 40 words based on their occurrences (after data pre-processing)

Word	Occurrences	Word	Occurrences
1. employee	23529	21. technology	10558
2. business	22815	22. leaders	10015
3. employees	21146	23. follow	9967
4. talent	20931	24. tips	9825
5. job	18712	25. use	9703
6. top	16242	26. news	9699
7. join	15915	27. social	9549
8. latest	15785	28. blog	9543
9. team	15114	29. better	9454
10. engagement	14116	30. hiring	9450
11. data	13275	31. UK	9422
12. management	13022	32. performance	9171
13. learning	12907	33. tech	9140

14. future	12816	34. right	9139
15. learn	12735	35. companies	9107
16. world	11182	36. big	9070
17. company	11103	37. global	8952
18. workplace	10837	38. culture	8943
19. free	10794	39. leadership	8939
20. change	10777	40. things	8802

Table 3. The top 40 hashtags based on their occurrences (after data pre-processing)

Hashtag	**Occurrences**	**Hashtag**	**Occurrences**
1. #hrtech	14555	21. #hris	3467
2. #leadership	13318	22. #futureofwork	3350
3. #employeeengagement	10895	23. #analytics	3301
4. #recruitment	8927	24. #hrnews	3244
5. #jobs	7628	25. #shrm	3091
6. #business	7514	26. #cloud	2892
7. #recruiting	7391	27. #technology	2837
8. #hrtechconf	6968	28. #engagement	2782
9. #job	6956	29. #hcm	2779
10. #hiring	5967	30. #tchat	2745
11. #humanresources	5833	31. #workplace	2726
12. #hrtechworld	5000	32. #peopleanalytics	2620
13. #learning	4877	33. #elearning	2614
14. #talent	4842	34. #employee	2517
15. #ai	4677	35. #startup	2502
16. #management	4395	36. #training	2495
17. #tech	4257	37. #hrtecheurope	2492
18. #quote	3636	38. #innovation	2423
19. #bigdata	3627	39. #talentmanagement	2411
20. #payroll	3528	40. #employees	2393

4.4 Data analysis strategies

In this section, I provide an overview of the analytical strategies used in each empirical essay. As depicted in Figure 12, Essay 2 involved construction of a retweet network that facilitated analysis of the relational structure of the field of digital HRM on Twitter. Specifically, I used network analysis techniques to identify the leading actors in the digital field based on their retweet interactions which captured the flow of information in the field. In contrast, in Essay 3 we

combine the author-topic modeling method with qualitative analysis to identify the discursive practices that field actors use as they try to create meanings of digital HRM on Twitter.

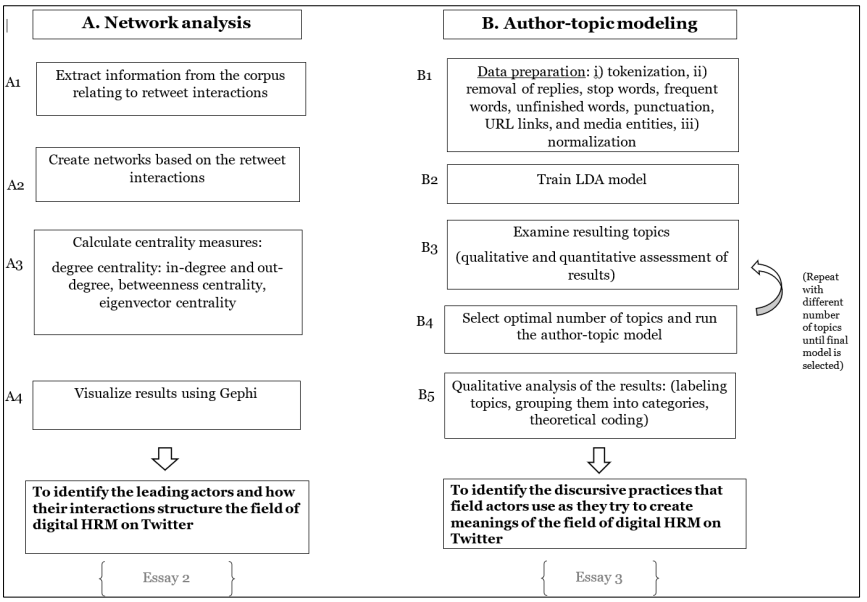


Figure 12. An overview of the analysis strategies

4.4.1 Social network analysis (Essay 2)

Institutional and organizational fields are frequently conceptualized as social networks, with actors serving as nodes and social relationships as interactions between them (Powell & Oberg, 2017; Powell et al., 2005; Powell et al., 1999; DiMaggio & Powell, 1983). In Essay 2 I focus on examining the relational structure of the field of digital HRM on Twitter, with the aim to gain a comprehensive understanding of its structure through the identification of leading actors and their position in the field. To accomplish this goal, I used social network analysis which included an examination of the retweet interactions among digital field actors (Oberg et al., 2017; Wasserman and Faust, 1994).

Figure 13 below illustrates the meaning of the retweet interactions as well as its main elements that facilitate the retweet network construction. Specifically, if a tweet was originally posted by User A and subsequently retweeted by User B, we can establish a directed link from User B to User A. Consequently, a directed graph can be formed with User B serving as the source node which represents the retweeter, and User A as the target node that represents the original author of the tweet. Thus, a retweet is a type of a new tweet that can reinforce information previously shared by another user. To that end, I assume that information and content that is circulated and disseminated across the digital field have greater potential to influence the structure and meanings of the field of digital HRM on Twitter.

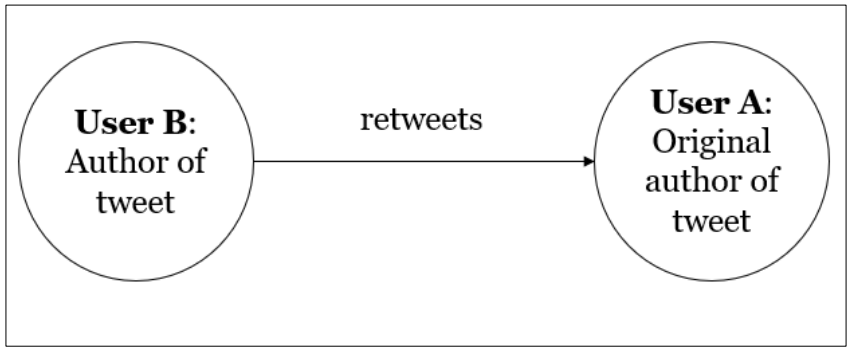


Figure 13. Retweet network construction

Within a retweet network, digital field actors are shown as "nodes" and their relative positions within the network determine the degree of their influence on disseminating information. These positions have the potential to establish the social roles which actors undertake in a network (Himelboim, 2017). To this end, I conducted a micro-level analysis of the interactions of digital field actors, focusing on node-level measurements. More specifically, I examine actors' structural positioning by computing four centrality measures including in-degree, out-degree, betweenness, and eigenvector centalities. Centrality refers to the importance of an actor in a network and assists in identifying actors who can influence and structural positions of actors in the digital field (Himelboim, 2017).

Degree centrality is a fundamental concept in network analysis (Borgatti, 2005), which refers to the number of connections an actor maintains with other participants in a given field (Himelboim, 2017). When actors exhibit high degree centrality, they act as hubs where information flows and discussions take place due to the numerous relationships they have formed with other actors in the network (Himelboim, 2017; Hanneman & Riddle, 2005). In directed networks where the ties have a direction, there are two forms of degree centrality: in-degree centrality and out-degree centrality. In-degree centrality indicates the connections that other users have established with a given actor, while out-degree centrality reflects the relationships initiated by the same actor with others (Himelboim, 2017). Wassermann and Faust (1994) posit that "the out-degrees are measures of expansiveness and the in-degrees are measures of receptivity or popularity" (p. 126). For example, in-degree centrality refers to the total number of retweets that an actor has received from others in the field, while out-degree centrality concerns the number of retweets shared by the same actor with others.

Betweenness centrality is a measure in network analysis that captures the extent to which an actor lies on the shortest path between other actors in a given field (Freeman, 1977; Himelboim, 2017). High betweenness centrality values indicate that many actors rely on them to establish connections with others, rendering them critical bridges between actors, discussions, topics, and ideologies (Burt, 1992; Himelboim, 2017). Hence, actors with high betweenness centrality

occupy an influential structural position in the network and are recognized as boundary spanners (Burt, 1992; Hansen et al., 2019; Himelboim, 2017).

Eigenvector centrality is an advanced metric used to determine an actor's prominence in a network, based on their proximity to other important actors (Newman, 2008). Scores for eigenvector centrality range from 0, indicating low importance, to 1, representing high importance, and reflect the degree of influence displayed by strategically positioned actors within the field (Hansen et al., 2019). This metric provides a detailed understanding of the complex relationships in a network, enabling researchers to identify those actors who occupy critical positions of power and are central to the overall field.

To compute the centrality measures and visualize the field of digital HRM as a network, I used Gephi software (Bastian, Heymann, & Jacomy, 2009). Gephi is an open-source software that offers several tools for the visualization and exploration of diverse types of graphs and networks. This software also allows to modify networks' structures, shapes, and colors to comprehend the graphs and uncover latent patterns and trends.

4.4.2 Author-topic modeling combined with qualitative analysis (Essay 3)

To conduct a comprehensive analysis of the extended dataset of tweets and retweets, I rely on machine learning techniques combined with qualitative analysis approaches. Machine learning refers to the use of statistical models and algorithms to identify patterns within data (Bishop, 2006). Specifically, in Essay 3 we use author-topic modeling, a form of unsupervised machine learning that captures the co-occurrence of words and aims to "discover and annotate large archives of documents with thematic information" (Blei, 2012: 77; Rosen-Zvi et al., 2010). Unsupervised machine learning is a method that relies solely on input data and is commonly used to automatically identify underlying patterns in multidimensional data (Leavitt et al., 2021). The algorithm independently explores unlabelled data and contributes to the detection of hidden patterns and structures (Leavitt et al., 2021).

Unsupervised methods, including author-topic modeling, offer an inductive approach to identifying topics in large corpuses of documents (Blei et al., 2003; Leavitt et al., 2021). This approach has the potential to provide researchers with new structures for interpretation, particularly in situations where predefined themes may not capture the nuances of dynamically changing phenomena (Evans & Aceves, 2016). The underlying assumption of topic modeling algorithms is that words found in similar contexts will typically have related meanings (Mohr & Bogdanov, 2013). Consequently, these algorithms adopt a relational perspective on meaning, where co-occurrences play a critical role in assigning words to topics (DiMaggio et al., 2013).

The Latent Dirichlet Allocation (LDA) algorithm is commonly used in the field of organizational studies for conducting topic modeling (Hannigan et al., 2019). To conduct topic modeling, we examine the frequency distribution of words in a collection of texts – in this case, tweets and retweets. The collection of texts is usually divided into documents which can be from one paragraph to a research

article. In Essay 3 we consider a document as the tweets of each actor separately. To introduce structural properties into the analysis, documents can be organized by source, time, or other relevant attributes, such as the group categories of actors (Aranda et al., 2021; Schmiedel et al., 2019). The LDA algorithm assumes that each document comprises multiple topics and that all documents share the same set of topics (Blei, 2012). However, the proportion of each topic varies across documents. Each topic represents a distribution over a fixed vocabulary (Blei, 2012), which means that although different topics may contain the same words, each topic can be characterized by a distinct pattern of word proportions.

Author-topic modeling extends the use of the LDA algorithm to include document authorship metadata (Rosen-Zvi et al., 2010; Rosen-Zvi et al., 2012). The core idea is that "a document with multiple authors is modeled as a distribution over topics that is a mixture of the distributions associated with the authors" (Rosen-Zvi et al., 2010: 1). However, even when a document has a single author, as in this study, the model can still function effectively. In addition to the standard distributions of topics across documents and words across topics, author-topic models also yield a distribution of authors for each topic. This provides researchers with an opportunity to draw conclusions regarding authors and their respective texts, including the topics that authors tend to focus on, which authors are likely to have written similar documents, and which authors may create similar content in the future (Rosen-Zvi et al., 2010). As illustrated in Figure 14, this approach represents a powerful tool for researchers seeking to extract meaningful insights from textual data by incorporating metadata regarding document authorship.

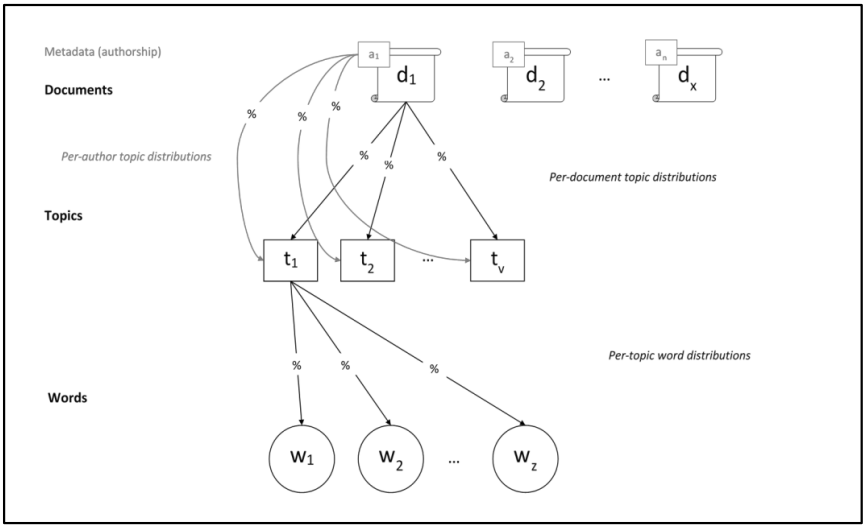


Figure 14. Schematic overview of author-topic modeling (adapted from Schmiedel et al., 2019 and Rosen-Zvi et al., 2010)

The LDA algorithm involves three crucial assumptions that illustrate the underlying principles of topic modeling. Firstly, the "bag of words" assumption

which posits that the order of words in a document is not significant (Blei, 2012). Hence, the specific structure and syntax in the text are not taken into consideration in data analysis. Secondly, the "bag of documents" assumption which suggests that the order of documents does not affect the outcome (Blei, 2012). The goal of topic modeling is to examine the various "bags of words" across documents and generate a number of topics that constitute a distribution of words (Mohr & Bogdanov, 2013). Thirdly, the LDA algorithm assumes that the number of topics in the corpus is fixed and known (Blei, 2012). However, since LDA is a generative algorithm, the topics are dependent on the frequency distribution of words in the documents, and not on "predetermined guidelines topics, or word lists imposed by the researcher or the automated software." (Croidieu & Kim, 2018:10). In this case, the algorithm generates some topics and researchers can interpret their meaning by either using them as input for further quantitative analysis or analyzing them qualitatively by drawing on grounded theory principles (Croidieu & Kim, 2018; Strauss & Corbin, 1990).

In Essay 3, we conduct a qualitative analysis of the generated topics and interpret them as first-order codes derived directly from the language used by the field actors. To facilitate this analytical strategy, we assign a label to each topic which relates to the discussions and actions concerning the digital HRM issue on Twitter. Rather than solely focusing on the content of the tweets, we sought to comprehend the underlying intent and purpose they serve such as the dissemination of learning opportunities in the digital space. To this end, we examined tweets that are relevant to the identified topics in order to acquire a more comprehensive understanding of the collective discourse. For the labeling of the topics, we draw upon the author-topic modeling technique, which provides a list of actors associated with each topic, and rely on the tweets generated by them to help determine the label most pertinent to the topic at hand. We then aggregated these labels into broader categories that corresponded to distinct aspects of the theoretical framework being employed. Finally, we examined the relationships among the topics and the associated actors by counting the instances of certain groups of actors being part of the topic discussions.

It should be noted that the qualitative analysis of big data using machine learning algorithms is a complex task that requires human judgement and intervention (Antoniak, 2022). More specifically, human intervention is required when cleaning the data to remove frequent words that can influence the outcome or remove words that may appear insignificant to external observers but have significant meaning within the specific context being studied. Moreover, human judgement is essential when determining the optimal number of topics and when assessing whether certain authors should be excluded from further analysis because they may be discussing the same topic in a dissimilar manner than the other associated authors (Antoniak, 2022). Such interventions enhance the credibility and validity of the findings.

4.5 Research ethics

The use of social-media data for research purposes presents several ethical considerations that are analogous to other methods of data collection such as interviews. These concerns include the distinction between public and private data, informed consent, anonymity, and potential risk of harm (Townsend & Wallace, 2016; Association of Internet Research, 2012). The debate surrounding whether social-media data should be considered public or private is one of the most pressing ethical issues. Some contend that social-media data fall into the public sphere because social-media users agree to the terms and conditions of the respective platform, which also outline how their data will be handled (Townsend & Wallace, 2016). However, this approach oversimplifies the distinction between public and private and ignores the importance of protecting the anonymity and identity of individuals or organizations involved in the research process (ibid.).

In addition to the ethical concerns raised by social-media data collection processes, this distinction is further complicated by the settings of online posts (Townsend & Wallace, 2016). For example, Twitter users may restrict access to their accounts, make their posts private, or use hashtags to reach a broader audience, thereby differentiating the status of each post. Hence, the dynamic nature of social-media platforms can result in transitioning from public to private and vice versa, adding a layer of complexity to the categorization. Hence, researchers need to take additional measures, for example by securing informed consent and maintaining anonymity, to safeguard the privacy of individuals and organizations in social-media data collection (Townsend & Wallace, 2016).

Informed consent is a fundamental principle of research ethics that requires that individuals give their explicit permission for using their data in research. This is typically obtained though signed forms or online checkboxes (Townsend & Wallace, 2016). However, the unique characteristics of social-media data collection present challenges in obtaining such consent, particularly when dealing with large datasets or when users are unaware that their data are being collected (Townsend & Wallace, 2016). Moreover, removal of posts or accounts can complicate the informed consent process in that they resemble withdrawal from the study. For instance, Twitter's policies require removal of deleted or locked accounts from databases and analyses; this can create additional complexity for researchers who may be unaware of these changes in real-time.

Although anonymity is a crucial aspect of ethical research, it poses significant challenges when dealing with social-media data. While the process of anonymizing interview data may be relatively straightforward, achieving anonymity with social-media data is often complex and, in certain cases, impossible (Townsend & Wallace, 2016). For instance, a tweet used as a quote can easily reveal the identity of the Twitter user. Nonetheless, aggregate-level anonymization is to some extent feasible, i.e., analyzing the collection of texts as a whole. Researchers need to consider the potential risk of harm prior to collecting or publishing data they consider public (Townsend & Wallace, 2016). This is especially critical when the research objective involves sensitive topics such as health conditions, sexual orientation, religion, or race (Salganik, 2017). In such cases, data

breaches or identity leaks could cause humiliation, embarrassment, and reputational damage, highlighting the importance of safeguarding the anonymity and privacy of individuals and organizations involved in social-media data collection (Townsend & Wallace, 2016; Association of Internet Research, 2012).

In this dissertation, I have followed the guidelines provided by the Twitter APIs and limited data collection to what was permitted by the platform in February 2018, when data collection for the study was completed, and did not employ any additional scraping techniques. Furthermore, whenever I detected that any data that has changed its status from public to private, I removed them from the analysis. As obtaining informed consent was not feasible, and with the intent to ensure the anonymity of research participants, all tweets cited in Essay 3 were paraphrased, thereby effectively protecting the identities of individuals and organizations involved in this research. This approach has been successfully adopted by other organizational scholars using Twitter data, such as Brooker et al. (2018).

5. Summary of essays

In this chapter, I present a summary of the three essays that comprise the second part of this doctoral dissertation. The first essay is a methodological review that discusses the importance of using online data to examine HRM phenomena and proposes an agenda for future research. This essay provides the methodological underpinnings for the two empirical essays, which focus on the development of an institutional field of digital HRM in the context of social media. In Essay 2, I examine the relational structure of the digital field which is operationalized through the retweet interactions of field actors, and in Essay 3 we explore the discursive practices that field actors use as they try to create meanings of the field of digital HRM on Twitter. Table 4 offers a summary of the individual essays.

Table 4. An overview of the essays

Essay	**Essay 1**	**Essay 2**	**Essay 3**
Focus	Significance of using online data for HRM research	Relational structure of fields	Discursive practices for creating meanings
Research question	How can online data be employed to study HRM phenomena?	Who are the leading actors, and how do their interactions structure the field of digital HRM on Twitter?	How do groups of interested actors try to create meanings around the field of digital HRM through their discourse on Twitter?
Data	Not available	93,626 retweet interactions among 55,879 actors	818,302 tweets of the identified 473 interested actors
Method	Methodological review	Exploratory social network analysis	Author-topic modeling combined with qualitative analysis

Theoretical perspective	Not available	Field structure and field actors' connectedness	Social-media discourse as a source of meanings
Authors	Platanou, K., Mäkelä, K., Beletskiy, A., & Colicev, A.	Platanou, K.	Platanou, K., Sdraka, M., & Vuorenmaa, H.
Publication outlet	*Journal of Organizational Effectiveness: People and Performance 2018*	*Earlier version of this essay presented at EGOS 2019*	*Earlier versions of this paper presented at EGOS 2020 and AoM 2022*

5.1 Summary of Essay 1

Platanou, Kalliopi.; Mäkelä, Kristiina; Beletskiy, Anton; Colicev, Anatoli. (2018). Using online data and network-based text analysis in HRM research. *Journal of Organizational Effectiveness: People and Performance*. Vol. 5, pp. 81 – 97.

Essay 1 argues for the relevance and added value of incorporating online data in the examination of HRM phenomena. This essay addresses the question of "*How can online data be employed to study HRM phenomena?*". The highlighted components in Figure 15 illustrate the part of the theoretical framework that this Essay examines.

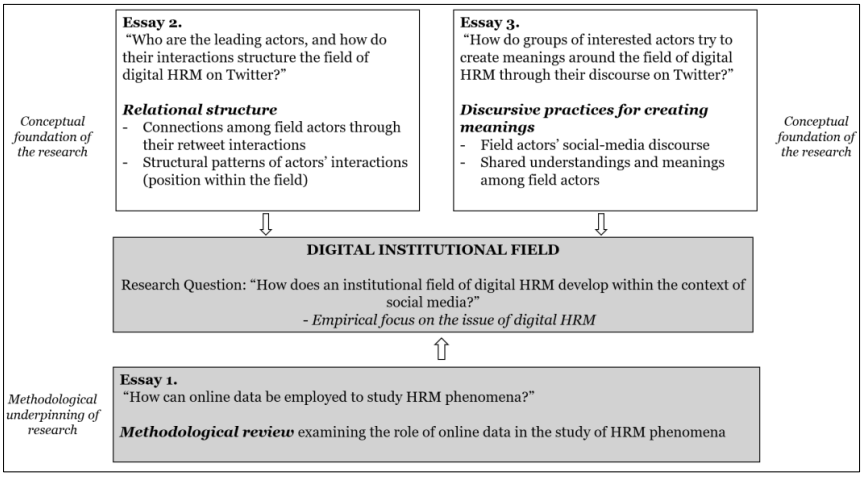


Figure 15. The part of the Theoretical Framework examined in Essay 1

Online data are defined as textual data generated in online spaces such as websites, social-media platforms, blogs, or discussion forums. It is worth noting that these data were not originally produced for research purposes. This essay argues

for the potential value added by online data focusing on its nature; it enables collection of real-time behavioral data that are produced without the intervention or hindsight bias of researchers (Platanou et al., 2018). It also discusses the potential challenges associated with online data, including ethical considerations, sample representativeness, validity, and applicability. Moreover, the essay outlines a range of methods and techniques for analyzing online data that often entail large datasets. It also introduces network-based text analysis, which is a promising analytical approach.

Importantly, Essay 1 proposes new directions for HRM research by highlighting the potential benefits of incorporating online data (see Table 5). The essay offers a comprehensive list of potentially interesting HRM phenomena that could be studied with online data and finds that such data can answer questions on various levels of analysis, including macro, meso, micro to the micro as well as on multiple levels. Table 5 summarizes these potentially interesting research areas.

Table 5. An HRM research agenda using online data (adapted from Platanou et al., 2018, p.91)

Level of analysis	Possible HRM research areas
Macro-level	- Professional and managerial discourses and dominant logics within the HRM field - HRM as a profession - Evolution of the HRM field
Meso-level	- Interactions and influence tactics among HR actors, including practitioners, consultants, academics, and opinion leaders - Legitimation of HRM practices
Micro-level	- Ethnographic research focusing on what HR professionals and practitioners really do - HR professional identity - HR roles at the individual level
Multi-level	- Cross-level analyses of the above topics

At the macro-level, online data can help map the various discourses in the HRM field and shed light on their emergence and development over time and across various groups and countries. By examining these discourses, HRM researchers can develop a comprehensive understanding of the HRM field and its evolution. At the meso-level, online data can be used to study how groups of actors such as HR professionals, professional associations, consultants, experts, and opinion leaders interact and influence each other. This approach enables HRM researchers to provide insights into how HRM ideas derive and are disseminated as well as how HRM actors seek to legitimize their ideas and influence practices without formal authority. At the micro-level, online data can be employed by HRM researchers to conduct online ethnographic research by studying the digital behavior of HR professionals on various media outlets such as personal blogs, Twitter, or LinkedIn. Thus, this type of research could shed

light into questions regarding what HR professionals actually do and how they construct their role and professional identity. Furthermore, the essay highlights that the above-mentioned topics can be studied across different levels of analysis by aggregating individual entries at the group, community, industry, or field levels. This multi-level approach enables HRM researchers to gain a more holistic understanding of the HRM field and its various actors and discourses.

5.2 Summary of Essay 2

Platanou, Kalliopi. Retweeting on Digital Human Resource Management: Mapping the relational structure of a digital field on Twitter. Unpublished essay.

Essay 2 examines the relational structure of the identified digital field around the issue of digital HRM on Twitter. I identified four roles that field actors played in structuring the field of digital HRM on Twitter, based on how information flows through the retweet feature. These roles developed based on four centrality measures, namely in-degree, out-degree, betweenness, and eigenvector centrality. Specifically, the identified roles include information leader, information disseminator, information broker, and information influencer (e.g., Kim & Valente, 2021).

The highlighted components in Figure 16 show the part of the theoretical framework that Essay 2 examines. The essay presents a novel approach to study fields in the context of social media using naturally occurring data (Bail, 2017) with little intervention from the researcher. It also provides new insights into the fluidity and permeability of fields that are formed in digital spaces (Powell et al., 2017) in demonstrating that the majority of the top 100 leading information leaders and information influencers were actors from outside the boundaries of the identified field on Twitter. The fluidity of digital fields is also shown by the fact that leading actors take on multiple roles depending on their connections with others and the retweets they performed and received. Finally, the essay finds that news media organizations, professional service firms, consultants, individuals in top-management positions, field-configuring events, and HR professional associations had a dominant involvement in information sharing about digital HRM while HR professionals and/or line managers that previous organizational research has focused on were not among the leading actors.

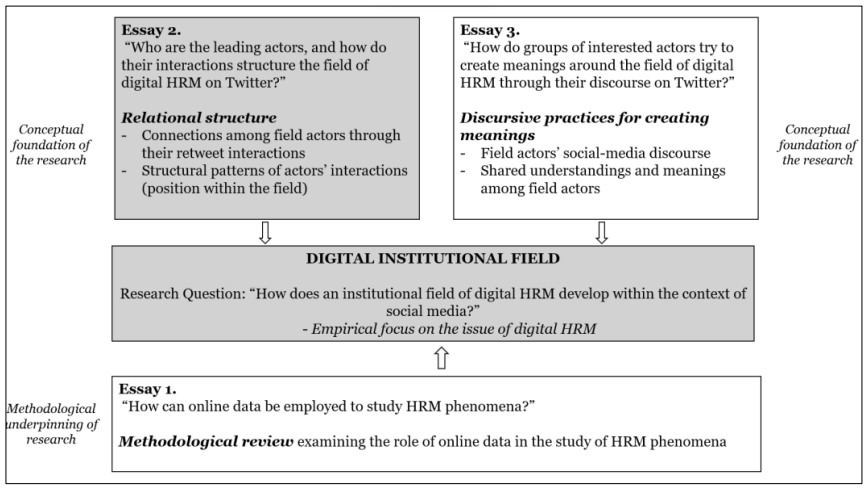


Figure 16. The part of the Theoretical Framework examined in Essay 2

In this essay, I argued that the structure of a digital field is motivated by increased information sharing and connectedness of field actors (DiMaggio & Powell, 1983). Social-media platforms enable the visibility and tracing of these actions through technical features such as the retweet function. To operationalize information sharing, I relied on the communicative act of retweeting which demonstrated how information flows among field participants. Consequently, I asked the following question: *"Who are the leading actors, and how do their interactions structure the field of digital HRM on Twitter?"*

Empirically, I utilized the retweet interactions performed by the 473 identified digital field actors, which resulted in a network of 55,879 actors (nodes) and 93,626 dyadic relationships (retweet interactions) and applied social network analysis methods to examine the structure of the digital field by calculating several centrality measures such as in-degree and out-degree centrality, betweenness centrality, and eigenvector centrality. Drawing on these centrality measures, I find the leading actors and the roles they take on in the field of digital HRM on Twitter. Table 6 shows the top 100 leading actors for each role together with information on their actor categories and field membership. As evident in Table 6, organizational actors such as professional service firms and news media organizations and individual actors such as top management and consultants retweeted in a way that dominated the field of digital HRM on Twitter. Although these actors have thus far been overlooked in digital HRM research, the essay points to their significance and potential power to influence digital HRM and calls for further research on their role in driving change in the digital HRM field.

Table 6. Roles that actors of digital HRM field play on Twitter

Identified roles	Description	Leading actors (N=100)	Field membership
Information leader	Actors who create information and knowledge	*Organizational actors (60)*	Insiders (19) Outsiders (81)

	about digital HRM, perceived as experts	Professional service firms (14) News media organizations (37) Professional associations (2) Field-configuring events (3) Non-profit organizations (2) Social-networking sites (2) Other organizational actors (0) *Individual actors (38)* Consultants (11) Top management (12) Managers and leaders (2) Professionals (2) Authors and speakers (4) Entrepreneurs and founders (3) Academics (3) Business psychologists and coaches (0) Other individual actors (1) *Non-identifiable (2)*	
Information disseminator	Actors who amplify digital HRM information expanding their reach	*Organizational actors (26)* Professional service firms (13) News media organizations (3) Professional associations (2) Field-configuring events (4) Non-profit organizations (0) Social-networking sites (2) Other organizational actors (2) *Individual actors (69)*	Insiders (100) Outsiders (0)

		Consultants (16) Top management (15) Managers and leaders (11) Professionals (11) Authors and speakers (3) Entrepreneurs and founders (4) Academics (1) Business psychologists and coaches (3) Other individual actors (5) *Non-identifiable (5)*	
Information broker	Actors who bridge different communities and discussions on digital HRM	*Organizational actors (46)* Professional service firms (29) News media organizations (7) Professional associations (2) Field-configuring events (5) Non-profit organizations (0) Social-networking sites (2) Other organizational actors (1) *Individual actors (51)* Consultants (12) Top management (15) Managers and leaders (8) Professionals (7) Authors and speakers (3) Entrepreneurs and founders (2) Academics (0) Business psychologists and coaches (0) Other individual actors (4) *Non-identifiable (3)*	Insiders (100) Outsiders (0)
Information influencer	Actors who influence digital	*Organizational actors (38)*	Insiders (19) Outsiders (81)

	HRM due to their connections	Professional service firms (12) News media organizations (17) Professional associations (2) Field-configuring events (3) Non-profit organizations (2) Social-networking sites (2) Other organizational actors (0) *Individual actors (57)* Consultants (13) Top management (18) Managers and leaders (6) Professionals (3) Authors and speakers (6) Entrepreneurs and founders (5) Academics (3) Business psychologists and coaches (0) Other individual actors (3) *Non-identifiable (5)*

More specifically, information leaders are actors who act as hubs of information and other field participants perceive them as prestigious and experts in digital HRM. Among the 100 leading actors, news media organizations (37%) such as news websites, blogs, books, and magazines, and professional service firms (14%) are the most central information leaders. Among the top 100 leading information leaders, 81 percent of them are actors outside the boundaries of the field of digital HRM on Twitter. Figure 17 below illustrates this point. This figure was created using the Force Atlas 2 layout in Gephi (Bastian, Heymann, & Jacomy, 2009) software and shows the top 100 leading information leaders of the whole network. The size of the nodes represents the in-degree centrality: the larger the size, the larger the in-degree centrality. The blue nodes indicate actors who do not belong among the identified actors in the digital field (outsiders), and the purple nodes represent digital-field actors (insiders).

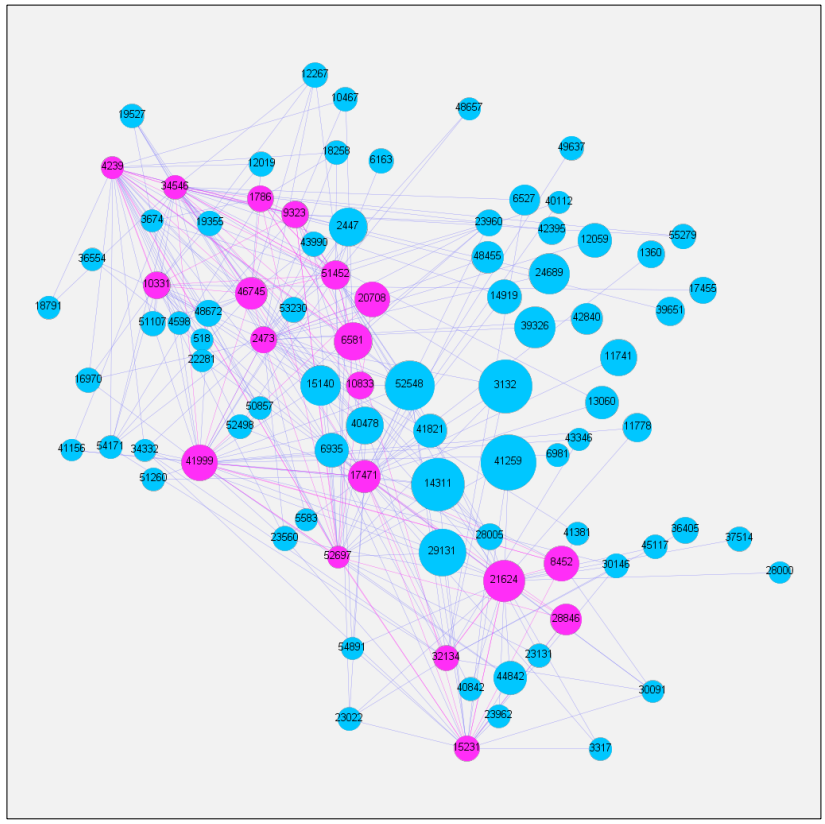


Figure 17. A graphic visualization of the top 100 leading information leaders and their field membership

On the other hand, information disseminators (e.g., Kim & Valente, 2021) are actors who shared information that have created by others, thereby expanding their reach and building their professional network. Among the top 100 leading actors playing this role, I find that individual actors (69%) mainly take this role including consultants (16%), top management (15%), managers and leaders (11%), and professionals (11%). In terms of organizational actors, 13 percent of the top 100 leading information disseminators belong to the professional-service-firms group. All information disseminators are actors from the identified field of digital HRM on Twitter.

Information brokers (e.g., Kim & Valente, 2021) are actors who bridge different discussions, topics, and ideologies. In the digital field around the issue of digital HRM, I find that professional service firms (29%) and individuals in top-management positions (15%) are among the top leading actor categories. This is an interesting finding in that professional service firms use the retweet function to share information in a way that allows them to connect the different parts of the field. As these professional service firms mainly include IT providers and management consultancies, the findings of this essay indicate the type of actors who have the potential to drive change in the digital HRM field pointing to the commercial aspect of digital HRM.

Lastly, information influencers reflect actors who hold strategic positions within the field due to their connection to other important actors. Among the top 100 leading actors that play the role of information influencers, individuals in top-management positions (18%), news media organizations (17%), consultants (13%), and professional service firms (12%) are the actors who mainly take on the role of information influencer. This role indicates organizations and individuals who possess authority and high status to shape the digital HRM field. Furthermore, the majority of leading information influencers (81%) are actors outside the boundaries of the field of digital HRM on Twitter. Figure 18 below shows the top 100 leading information influencers and illustrates this point. This figure was created using the Force Atlas 2 layout in Gephi software (Bastian, Heymann, & Jacomy, 2009). The size of the nodes represents the eigenvector centrality: the larger the size, the larger the centrality. The blue nodes indicate actors who do not belong among the identified digital field actors (outsiders), and the purple nodes represent the actors in the digital field (insiders).

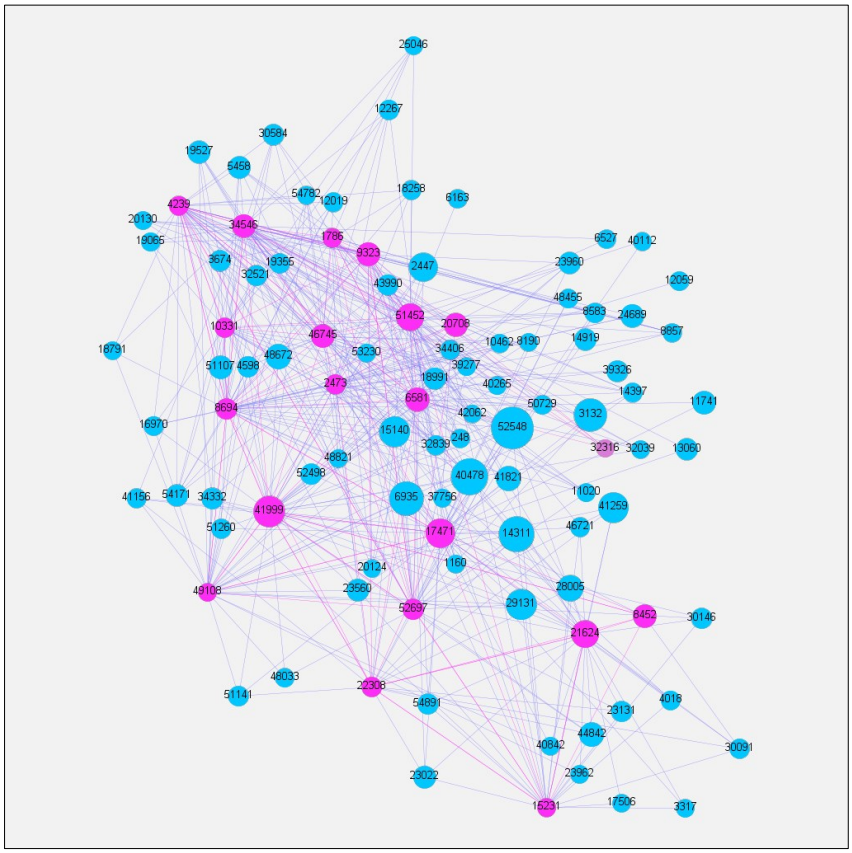


Figure 18. A graphic visualization of the top 100 leading information influencers and their field membership

5.3 Summary of Essay 3

Platanou, Kalliopi, Sdraka, Maria, & Vuorenmaa, Hertta. Tweeting on digital Human Resource Management: Exploring the attempts to create meanings within digital institutional fields. Unpublished essay.

Essay 3 examines the discursive practices that field actors use in trying to create meanings of digital HRM through their social-media discourse on Twitter, i.e., tweeting. More specifically, we ask the following question: *"How do groups of interested actors try to create meanings around the field of digital HRM through their discourse on Twitter?"*. The highlighted boxes in Figure 19 illustrate the part of the theoretical framework that Essay 3 examines. In this essay we take a field-level approach and identify a digital field around the issue of digital HRM on Twitter and examine how field actors try to create meanings of this emerging field through tweeting. Specifically, we conceptualize tweeting, i.e., discursive practice as actions (Jones et al., 2015) that the actors perform and view the relationship among discourse, meanings, and actions as constitutive (Phillips et al., 2004).

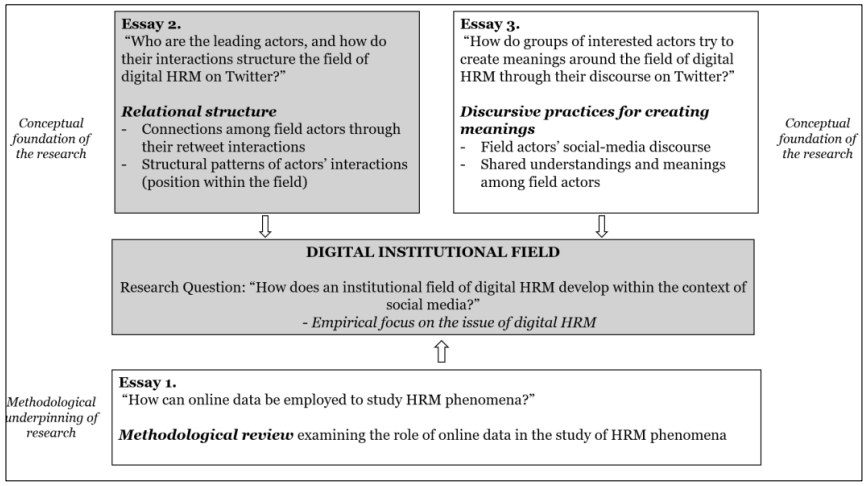


Figure 19. The part of the Theoretical Framework examined in Essay 3

Analysis of a social-media discourse comprising 818, 302 tweets and retweets showed that field actors use three discursive practices as they try to create meanings around the emerging field of digital HRM on Twitter. These practices include raising awareness of digital HRM, advocating digital HRM technologies, and practicing digital HRM using Twitter as a tool (see Table 7).

Table 7. Field-level practices and actions that actors use to make meanings of digital HRM on Twitter

Field-level practices	Associated actions	Frequency[5]
Raising awareness of digital HRM		**53%**
	- Educating the HR community about digital HRM online, on the Twitter platform	29%
	- Disseminating learning opportunities that arise in digital spaces	12.4%
	- Disseminating learning opportunities that arise in physical spaces	5.8%
	- Constructing virtual networks	5.8%
Advocating digital HRM technologies		**37.1%**
	- Debating the use of digital technologies	10.2%
	- Promoting digital technologies highlighting their technology features	5.8%
	- Promoting digital technologies by sharing information resources	21.1%
Practicing digital HRM using Twitter as a tool		**9.4%**
	- Advertising job opportunities	6.5%
	- Facilitating employer branding	2.9%

More specifically, the most dominant practice that field actors use is related to raising awareness of digital HRM (53 percent of topics are associated with it) and involve the following actions: i) educating the HR community on digital HRM online on the Twitter social-media platform through chats and sharing opinions, experiences, and information; ii) disseminating learning opportunities that arise in digital spaces such as webinars, iii) disseminating learning opportunities that arise in physical spaces such as invitations to field-level events;

[5] In this essay, we applied author-topic modeling and qualitative analysis. The frequency of practices and actions derived from dividing the number of topics associated with these practices and actions by the total number of topics.

and iv) constructing virtual networks. Actors who perform these actions leverage the technical features and material objects of the social-media platform such as following and hashtags to create an HR community and share information relating to digital HRM. Moreover, they disseminate learning opportunities that take place in physical and digital spaces facilitating a complementary relationship for creating meanings between these two spaces. Live commentary of field-level events on Twitter using dedicated hashtags is an illustrative example of how creating meanings unfolds bridging the physical and digital space.

The second most prominent field-level practice is advocating digital HRM technologies (37.1 percent of the topics are associated with it) and includes the following actions: i) debating the use of digital technologies; ii) promoting new tools and services highlighting their technology features; and iii) promoting new tools and services by sharing information resources such as links to provide additional information and free trainings. Actors who perform these actions have a direct interest in digital HRM technologies such as exploiting business opportunities and selling products and services. This is not surprising because of the rapid growth of the HR technology market (Bersin, 2021) which is populated by organizations of all sizes that develop new digital HRM products.

Lastly, we identified a third field-level practice, which is less common (9.4 percent of the topics are associated with it) and involves the use of Twitter as a tool for practicing digital HRM. This practice relates to i) advertising job opportunities and ii) facilitating employer branding. These actions aim at performing HRM activities and, in essence, showcasing how digital HRM could look like in practice.

Furthermore, we find that 'Professional Service Firms', 'Top Management', 'Managers and Leaders', and 'Consultants' use various discursive practices simultaneously in trying to create meanings around the emerging field of digital HRM on Twitter. Figures 20 and 21 illustrate this point. More specifically, these actors try to create meanings by educating and disseminating learning opportunities for the HRM community (i.e., raising awareness of digital HRM) whilst simultaneously promoting specific new digital HRM technologies by sharing information resources on Twitter. (i.e., advocating for digital HRM technologies). Hence, social-media platforms create a space for field actors in which they can tap into the social-media affordances to create meanings that are favorable to them and which they are aligned with their own agendas and interests in further developing their business goals and professional careers.

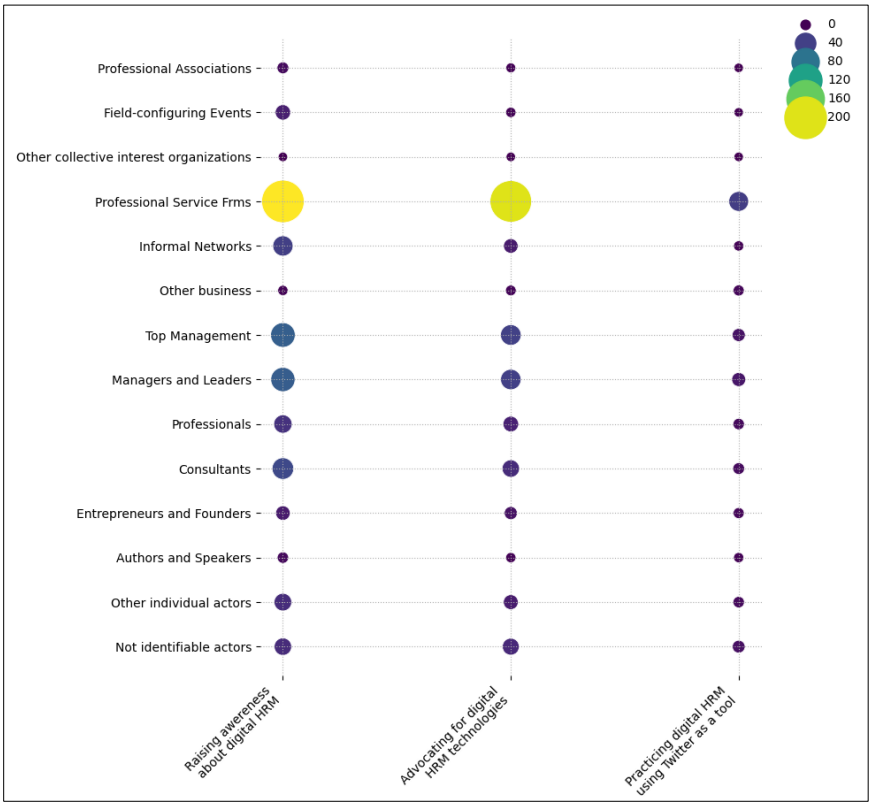


Figure 20. The association between groups of actors and discursive practices

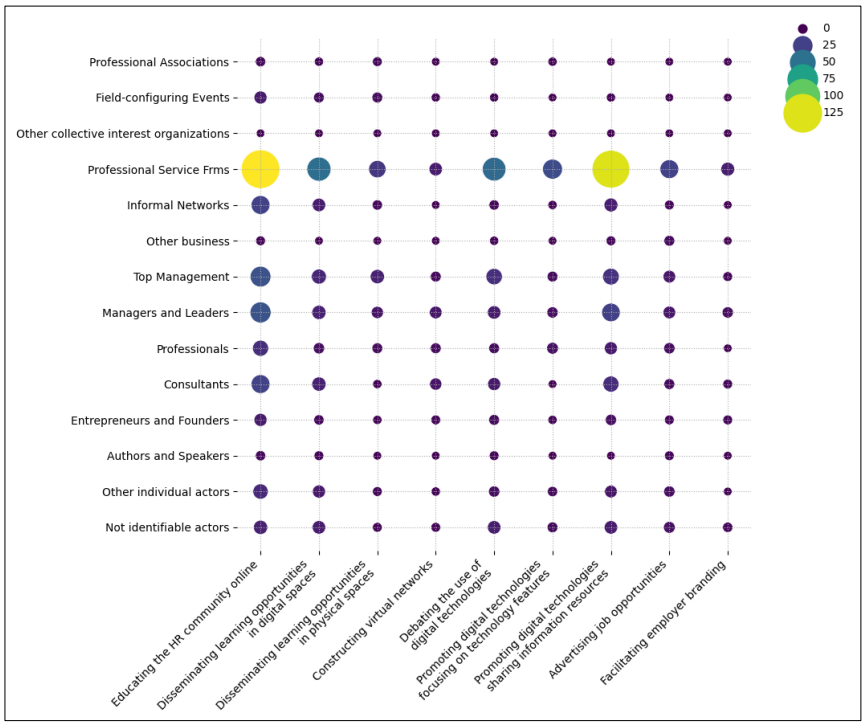


Figure 21. Association between actor categories and actions

In conclusion, this essay makes the following contributions. First, it contributes to the digital field's literature (e.g., Powell et al., 2017) by showing how field actors use social-media discourse, i.e., tweeting, in trying to create meanings around the field of digital HRM on Twitter. In that way, we demonstrate how social-media discourse can be a source of creating meanings by identifying three discursive practices which are conceptualized as actions (Jones et al., 2015) that actors perform through their tweets. Second, we demonstrate how social-media discourse makes the boundaries of discursive practices blurrier and more porous due to Twitter's technological affordances and constraints as a digital discursive space. More specifically, we show how social-media platforms allow field actors to use simultaneously various discursive practices when trying to create meanings that are in line with their own interests and viewpoints as well as future expectations. Third, we take a field-level approach as opposed to mostly firm-level research, thereby expanding the focus of HRM research. Specifically, we identify a community of relevant actors who have the potential and power to alter the meanings of the field of digital HRM. Importantly, we show that professional service firms, informal networks, top management, consultants, managers and leaders are among the actors that dominate the field of digital HRM on Twitter. Fourth, we make a methodological contribution by using social-media data to study the emerging field of digital field and analyze them combining machine learning and qualitative methods.

6. Discussion and contributions

The main research question of this dissertation was, "*How does an institutional field of digital HRM develop within the context of social media?*". This question was further divided into two specific parts, a methodological review and two empirical studies. Essay 1, the methodological review, focused on exploring the relevance and significance of using online data for studying HRM phenomena, asking "How can online data be employed to study HRM phenomena?". Empirically, Essays 2 and 3 examined specific aspects of how institutional fields develop in a social-media context and focused on exploring the relational structure (Essay 2) and discursive practices for creating meanings (Essay 3) of a field that was formed around the issue of digital HRM on Twitter, referring to as a digital field. The purpose of this chapter is to bring the different parts of this dissertation together and synthesize the findings of the individual essays.

The dissertation contributes to the institutional fields' literature (e.g., DiMaggio & Powell, 1983; Scott, 1995; Hoffman, 1999; Powell et al., 2017) by extending the locale of field formation and development to the social-media context. Despite extensive research on institutional fields, it has mainly focused on interactions and discourse that has generated by actors who were co-present in space and time (e.g., Meyer & Vaara, 2020; Thomspon, 2005). This dissertation took a novel approach to study the development of an institutional field of digital HRM in the context of social media, referring to digital fields, in which interaction among actors cross spatial and temporal boundaries. What makes the dissertation distinct from prior research is that it relies on naturally occurring data (Bail, 2017) from Twitter to study "micro-level institutional processes at the level of real-life" (Powell & Oberg, 2017: 460), instead of self-reporting data such as surveys and interviews. Thus, this dissertation has demonstrated the dual role of social media in studying institutional fields and digital HRM in that it represents the space in which actors are brought together to discuss issues of concern as well as presents unique opportunities for collecting data that are not produced for research purposes, thereby giving the opportunity to reveal underlying structures and patterns of social interaction. This approach revealed that boundaries of digital fields are fluid and porous (e.g., Powell et al., 2017) due to the social-media affordances and constraints which create a digital space in which actors perform actions that shape understandings of digital HRM. These affordances and constraints include, for example, using hashtags, writing messages in a short format, retweeting, discussing with others, following, and liking.

As discussed earlier, I defined digital fields as a temporary arrangement of individual and organizational actors brought together as a result of increasing attention to an issue, and who frequently interact and actively participate in shaping meanings around the issue in question through their texts and interactions (DiMaggio & Powell, 1983; Scott, 1995; Hoffman, 1999; Coraiola et al., 2018). Moreover, I argued that the structure of a digital field is motivated by the increased information sharing among field actors and was operationalized through the retweet interactions which captured the action of sharing content created on Twitter. I also considered social-media discourse a source of creating meanings around the field of digital HRM and examined the discursive practices by which actors tried to create meanings of digital HRM. In this dissertation, I studied these aspects of digital fields analyzing social-media data through social network analysis (Wasserman & Faust, 1994), author-topic modeling (Rosen-Zvi et al., 2010), and qualitative methods (e.g., Strauss & Corbin, 1998). Figure 22 below provides a summary of the main findings and contributions, which are discussed next.

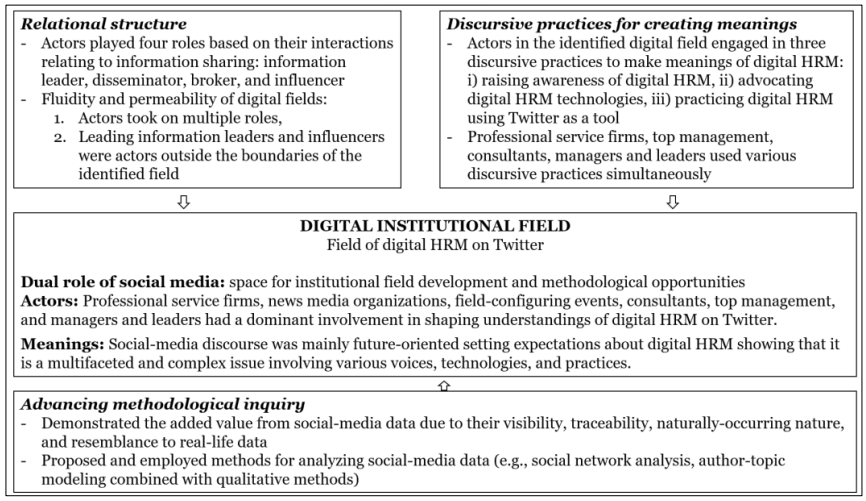


Figure 22. Summary of main findings and contributions of the dissertation

6.1 Development of digital fields through social-media interactions and discourse

To study the development of digital fields, I first identified a field of digital HRM on Twitter which comprised 473 organizational and individual actors and then examined their Twitter interactions and discourse. More specifically, these actors generated a social-media discourse amounting to 818,302 tweets and retweets. Based on this discourse, I created a network of of 55,879 actors and 93,626 dyadic relationships which represented the retweet interactions (i.e., sharing content on Twitter) that these actors performed. In the wide body of research focused on institutional fields, social-media interactions and discourse have thus far been overlooked (see Gumusay et al., 2022 for an exception). This

dissertation investigated the relational structure and discursive practices for creating meanings through the sources described above to provide new insights into the development of institutional fields.

Taking stock of research on relational structure of fields (e.g., DiMaggio & Powell, 1983; Powell et al., 2017; Oberg et al., 2017), I argued that the structure of digital field is motivated by increased interactions among actors and increasing information sharing (Powell & Oberg, 2017). These aspects were operationalized through the retweet interactions. Retweet is a technical feature of the Twitter platform which made information sharing among actors visible and traceable, thus offering a large number of interactions among actors that would not be possible through traditional approaches of creating networks, i.e., through surveys and interviews. The findings of Essay 2 revealed patterns of information-sharing interactions in that actors played four roles in the digital field, namely information leader, information disseminator, information broker, and information influencer.

More importantly, the findings showed that the digital field boundaries were fluid and porous which was demonstrated in two ways. First, the actors in the digital field took on multiple roles. For example, actor 41999, a field-configuring event, took all four roles but to varying degrees in that it was the top leading information broker but the 78th leading information disseminator. On the other hand, actor 20708, a professional service firm, played the roles of information leader and information influencer. This also showed that social media make fields more complex in that it becomes relatively easy for someone to become influential in the field once they learn what content to retweet. Second, 81 percent of the top 100 leading information leaders and 81 percent of the top 100 leading influencers were actors from outside the boundaries of the identified field. Therefore, this dissertation contributes to institutional fields literature by illustrating that social-media affordances such as visibility and easiness of interactions have made possible for field actors to gain an influential position and exert power within a digital field. Furthermore, the dissertation demonstrated the permeability of field boundaries in digital spaces (Powell et al., 2017) in that actors who hold dominant and central positions in the digital field are not members of the identified field.

Discourse is a source of creating meanings within fields and has been extensively studied through interviews and archival material (e.g., Hardy & Phillips, 1999; Phillips et al., 2004; Grodal & Granqvist, 2014). This dissertation contributes to this line of research by tapping into a relatively underexplored type of discourse, that of social media. In Essay 3 we examined a social-media discourse relating to digital HRM on Twitter and demonstrated how actors used several discursive practices simultaneously in trying to create meanings around the field of digital HRM on Twitter. More specifically, the findings showed that actors used three discursive practices in trying to create meanings around the issue of digital HRM. First, field actors raised awareness about digital HRM by educating the HRM community on Twitter, disseminating learning opportunities that arose in both physical and digital spaces, and building virtual networks. Second, field actors advocated for digital HRM technologies through debating

the use of digital technologies and promoting digital technologies by sharing information resources on them and highlighting their technical features. Third, field actors practiced digital HRM using Twitter as a digital tool, and they mainly advertised job opportunities and facilitated employer branding.

Interestingly, the findings of Essay 3 showed that the groups of professional service firms, top management, managers and leaders, and consultants used various discursive practices simultaneously in trying to create meanings that were favorable to them and were aligned with their own interests and future expectations regarding their position in the field (Grant & Hardy, 2004). To illustrate, professional service firms not only tried to create meanings by promoting specific new digital technologies but also engaged in efforts relating to educating and sharing learning opportunities for the HRM community. Hence, social-media discourse makes the boundaries of discursive practices for creating meanings blurrier and more porous because it becomes easier for field actors to move from one practice to another. This can be explained by the fact that social-media platforms such as Twitter create a digital discursive space that create new opportunities for creating meanings around emerging fields through their technological affordances and constraints.

6.2 Enhancing understanding of digital HRM through social media

Digital HRM, defined as the use of digital technologies, such as social media, cloud computing, analytics, mobile applications, and internet of things, to improve the efficiency, effectiveness, and strategic orientation of HRM activities, practices, and processes (Bondarouk et al., 2017; Thite, 2019; Strohmeier, 2020a), is viewed as the issue around which a digital field is formed on Twitter. In this dissertation I took a field-level approach as opposed to mostly firm-level research in the area of digital HRM (e.g., Holm, 2014 for an exception). Studying digital HRM from a field perspective (e.g., Holm, 2014), I also responded to calls for a multi-actor approach (Sanders et al., 2014; Mäkelä et al., 2014; Björkman et al., 2014) demonstrating a plurality of actors involved in shaping understandings of digital HRM on Twitter. This approach has allowed me to identify a community of relevant actors (e.g., DiMaggio & Powell, 1983) that have the potential to drive change in the digital HRM field. Specifically, I found a plurality of actors including professional service firms, field-level events, professional associations, top management, consultants, and managers and leaders. The findings of Essays 2 and 3 show that professional service firms dominate the field of digital HRM on Twitter while news media organizations and experts such as consultants are among the leading actors in the field. However, the findings of the essays revealed that HR managers and HR professionals are not the key shapers of digital HRM in the identified field but rather observers or absent from the discussion.

Actors, internal and external to organizations, play an important role in shaping understandings of digital HRM, thereby influencing the future of HRM.

Combining findings from Essays 2 and 3, this dissertation shows that professional service firms, news media organizations, individuals in top-management positions, field-configuring events, consultants, and managers and leaders had a dominant involvement in shaping the understandings and meanings of digital HRM while HR professionals and/or line managers that organizational research has focused on were not among the leading actors. These actors held central positions in the digital field and can be the shapers of digital HRM through their discourse and information sharing.

However, these actors have different interests in digital HRM, and thus promoting their own agenda and viewpoints through their social-media interactions and discourse. For example, professional service firms such as software vendors and consultancies have a direct interest in digital HRM through selling products and services, whereas field-configuring events mainly aim at creating a space for the HRM community to build a consensus around digital HRM. On the other hand, news media organizations share latest developments and best practices in digital HRM, and consultants and other individuals try to expand their reach and network whilst trying to establish their positions as experts in the field.

With the findings of the dissertation, I demonstrated that digital HRM is a multifaceted and complex issue that involves three main elements namely digital technologies, HRM activities and practices, and digital HRM's impact on organizations. An examination of the social-media discourse showed that meanings associated with digital HRM were mostly future-oriented exhibiting future expectations rather than current realities. Although it was not included in the analysis in Essay 3, it is important to note that the word 'will' was the eighth more frequent word in the dataset appearing 29486 times (see Appendix A) which is an indication of future-oriented discussions.

Delving into the meanings of digital HRM on Twitter, I found that various levels of digital technologies such as software solutions, mobile applications, analytical technologies, and advanced technologies like artificial intelligence and robots were part of the conversation showing the degree of technology penetration in organizations for HRM purposes. In turn, the Twitter discourse indicated that digital technologies influence several HRM activities and practices with recruitment, talent management, training, learning, payroll, performance management, and leadership being the most prominent ones. Finally, digital HRM is closely related to HRM and organizational outcomes such as employee engagement, employee experience, and organizational performance. Digital HRM research has paid little to no attention to these aspects which could further elucidate the concept of digital HRM and its importance within organizations.

6.3 Advancing methodological inquiry in HRM research

This dissertation has provided a novel, enhanced understanding of digital field development around the issue of digital HRM in the context of social media using naturally occurring data (Bail, 2017), collecting big data from Twitter, and analyzing them with various methods such as network analysis (Wasserman &

Faust, 1994) machine learning (Rosen-Zvi et al., 2010), and qualitative methods (Strauss & Corbin, 1998). Such approaches are rarely used in HRM and organizational research (e.g., Hannigan et al., 2022), but they offer significant potential to uncover underlying structures in large amounts of data and identify topics and relationships among them.

In Essay 1 we argued that digital spaces such as social-media platforms enable the collection of real-time behavioral data which are generated without the intervention or hindsight bias of researchers (e.g., Bail, 2017). This source of data captures real-life social-media interactions (Powell & Oberg, 2017) that have the potential to shed light into the digital field development and digital HRM issue compared to self-reported data such as surveys and interviews. More specifically, social media allowed identification of a diverse set of actors who shared an interest in digital HRM that would not be feasible otherwise. For example, if I had used interviews to study the field of digital HRM, I would perhaps have not realized the dominance of professional service firms such as IT vendors and management consultancies in the field. Moreover, social-media data enabled identification of discussions and social interactions because they are visible, easily traceable, and available for extended periods. This, in turn, allowed the collection of social-media discourse and interactions about digital HRM for a 10-year period.

Despite the added value of online data for the study of organizational phenomena, we recognized the challenges associated with them such as ethical and privacy considerations, sample representativeness, validity, and applicability which were further discussed in Chapter 4. Such issues are increasingly important, and this dissertation has presented ways in which researchers can deal with some of these concerns. For example, we have utilized Twitter's API for data collection instead of scraping data from Twitter via third party tools which in many cases is prohibited. Moreover, we employed machine learning methods and social network analysis to analyze data at an aggregate level without focusing on individual tweets which could lead to the identity of the author. In cases that we needed additional supporting evidence we paraphrased the tweets we used (e.g., Brooker et al., 2018).

In terms of analyzing big data from social media, I have applied an interpretative approach (Hannigan et al., 2022) combining machine learning methods with qualitative analysis. Such a combination holds significant potential in expanding researchers' toolkit (Hannigan et al., 2019 for a review on topic modeling in organizational research), but it is a challenging process. In the following I describe these challenges and propose solutions based on the procedures followed in this dissertation. First, the commonly used algorithms for topic modeling in organizational studies, i.e., Latent Dirichlet Allocation (Hannigan et al., 2019) has not been developed for the analysis of short texts such as tweets which may contain only a few words. To overcome this challenge, I combined the tweets created by each actor in one document, instead of using each tweet as a separate document as might have been expected. Second, qualitative analysis typically assumes that researchers immerse themselves in the data and conduct

multiple rounds of data readings. However, in the case of big data such an approach is not feasible. To deal with this challenge, I have incorporated structural properties in the topic modeling analysis (Aranda et al., 2021; Schmiedel et al., 2019) which provided me with information on the most likely associated actors with each topic. This enabled a better understanding of the data as I could zoom-in into topics and read relevant tweets. Third, author-topic modeling like other machine learning methods are probabilistic models which can only offer an approximation of what is said in the data utilizing the words of the actors. To strengthen this feature of machine learning methods, I have used human judgement throughout the various stages of the analysis such as choosing the optimal number of topics, assigning topic labels, and interpreting the findings (Antoniak, 2022).

Furthermore, this dissertation advances methodological inquiry by outlining a research agenda for HRM utilizing online data. Specifically, Essay 1 offered a list of potentially interesting HRM phenomena that could be investigated through online data (Platanou et al., 2018). First, online data can facilitate the mapping of various discourses within the HRM field and shed light on their emergence and evolution over time. They can also be utilized to study how different groups of actors, such as HR professionals, professional associations, consultants, and opinion leaders, interact and influence each other. This approach enables HRM researchers to provide insights into how HRM ideas spread across countries, and how diverse HRM actors seek to legitimize and influence HRM practices. Moreover, HRM researchers can use online data to conduct online ethnography by exploring the digital behavior HR professionals on various mediums, such as social-media platforms and personal blogs. In that way, using online data can answer questions regarding the role and identity of HR professionals. Moreover, this essay highlights that the above-mentioned topics can be studied across different levels of analysis by aggregating data at the group, community, industry, or field levels. This multi-level approach enables HRM researchers to gain a more holistic understanding of the HRM field and its various actors and discourses.

6.4 Practical implications

This dissertation has been driven and informed by the digital behavior of various individual and organizational actors in a social-media platform. This enabled me to observe and analyze how actors communicate and interact with each other without any intervention. As a result, this research provides the broader HRM community and field with the following practical implications.

The analysis of the Twitter discourse revealed that a considerable number of actors disseminate learning opportunities that take place in physical and digital spaces such as field-level events, webinars, interview podcasts, and trainings. Furthermore, this discourse was aimed at making sense and meanings of digital HRM which indicates its relevance and significance for HR practitioners. This suggests that the HRM community, as a whole, is searching for ways to familiarize themselves with the latest developments in the field. It is therefore clear

that the education of HR professionals about digital HRM is crucial for the future of the HRM profession and should be integrated into the formal education setting. This research has pointed to some aspects of digital HRM that were deemed important and could be included in the curriculum of relevant courses. These aspects relate to advanced digital technologies such as artificial intelligence and HR analytics and how they affect HRM practices such as recruitment, talent management, training and learning. Moreover, the findings revealed that digital technologies have an impact on business performance, employee engagement and experience. Incorporating digital HRM topics into the curriculum of HRM courses in business schools could provide them with the necessary tools to navigate the digital landscape effectively. A deeper understanding of these topics could enable HR professionals to effectively utilize digital HRM practices in their respective organizations, leading to increased efficiency and effectiveness.

The vast amount of information on digital HRM available in digital spaces presents a challenge to HR professionals as it covers a wide range of topics and often expresses conflicting viewpoints. This raises concerns about misinformation, trust in sources, and self-reported expertise on digital HRM issues. HR professionals must exercise critical thinking and consult multiple sources to make informed decisions regarding digital HRM, or any other issues. By recognizing the actors involved in digital HRM and the meanings they create, HR professionals can better weigh the information shared and make informed decisions.

6.5 Limitations and suggestions for future research

Having discussed the contributions and implications of the dissertation, I nevertheless recognize that this research is not without limitations. In this final section, I identify the limitations of the research and provide avenues for future research.

This dissertation has taken a novel approach to study digital field development around the issue of digital HRM within the social media context. To establish the boundaries of the digital field, I have followed a relational approach through which I first selected a group of active HRM actors, namely HR professional associations and HR technology conferences, and then identified their common followers on Twitter. While this method has shed light on the digital field development and digital HRM meanings, it nevertheless limits the diversity of actors that might be involved in a digital field. Alternatively, future research could examine the digital field development around digital HRM utilizing the hashtag feature of Twitter. For example, researchers could collect data related to digital HRM using hashtags such as #digitalhr or #futureofwork and then identify the actors involved in this issue.

To examine the digital field development, I focused on the relational structure (Essay 2) and discursive practices for creating meanings of the field of digital HRM (Essay 3) separately. Future research could examine digital field development combining relational and meaning structures utilizing more sophisticated

methods as presented by Oberg et al., (2017) and Basov et al., (2021) or ready-made software solutions as illustrated in Essay 1. However, the disadvantage of using commercially available software is that researchers are not fully aware of the algorithms that are developed for data analysis and are limited to operating certain functions. A potentially interesting approach to combine relational structure and discursive meaning-making would be to create a network which represents the relationship between actors and their use of hashtags.

In this dissertation, I have argued that discourse is a source of creating meanings of digital HRM on Twitter. As previous research has shown, rhetoric and framing can also be sources of creating meanings within institutional fields (Leibel et al., 2018). Therefore, future research could investigate how rhetoric and framing processes unfold in the tweets of relevant field actors. It is important to note that this perspective would require researchers to focus on a smaller amount of data and qualitatively analyze the rhetoric and frames adopted by the digital field actors.

The insights gained from this research provide an understanding of meanings about digital HRM through the social-media interactions of relevant actors on Twitter. As this research is based on a single-source, future studies could complement social media with interviews or surveys for an enhanced understanding of digital HRM within and outside the organizational context. For example, research on digital HRM could focus on less examined actors such as field-configuring events, HR professional associations, software vendors, news media organizations, and experts in the field to investigate how they shape the meanings of digital HRM.

Another limitation of this research is language bias. The analysis was conducted only on tweets written in English, which limits the examination of the phenomenon from a western point of view. To gain a more comprehensive understanding of digital HRM, it would be essential to include tweets collected in other languages. This would provide additional insights into the phenomenon and help overcome language bias.

Twitter's API and privacy rules present some limitations to this research as well. At the time of the study, Twitter Standard API allowed the collection of the 3,100 most recent tweets from each actor's time. As a result of these restrictions, I was not able to collect the full timeline of interactions of the identified. This means that in some cases, the analysis might miss parts of the discourse and interactions of very active actors. Similarly, at the time of data collection, Twitter allowed researchers to download only 140 characters of tweets, which means that for some tweets, I was not able to download the full tweet but a fraction of it. As a result, some words, hashtags, and mentions could not be included in the analysis.

Furthermore, the chosen methodology presents some limitations. The LDA algorithm used to derive topics from tweets does not differentiate among the multiple meanings that words might have (polysemy of words). For example, the word "learning" might refer to the HRM management practice or to the process of learning through reading online material or visiting HR technology con-

ferences. This creates ambiguities in the qualitative analysis of the derived topics and their further categorization into grouped categories. This limitation can be addressed by introducing human intervention and judgement in various stages of the analysis such as data cleaning and removing topics that are not clear or relevant to research questions.

Despite its limitations, this dissertation provided the backbone for the study of the development of institutional fields in the context of social media, referring to as digital fields (e.g., Levina & Arriaga, 2014; Lindell, 2017; Powell et al., 2017; Serino, 2021). Social-media platforms will continue to play an important and influential role in understanding and shaping current events and issues such as political debates (e.g., Bail et al., 2019; Bail 2022), social movements (e.g., Ray et al., 2017), and health crises (e.g., Kim & Valente, 2021). More specifically, social media can challenge our assumptions and make us rethink the interplay between texts, contexts, actions, interaction, power, and ideology (Jones et al., 2015; Phillips et al., 2004), thereby redefining old theories or developing new ones. This dissertation has been an attempt to rethink how the institutional field of digital HRM is developed in the context of social media and hopes to inspire future researchers to further this line of research.

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Appendices

Appendix A. The top 250 words after pre-processing

Words	Occurrences	Words	Occurrences
employee	23529	let	4625
business	22815	build	4600
employees	21146	excited	4579
talent	20931	customer	4572
job	18712	give	4498
top	16242	leader	4495
join	15915	book	4462
latest	15785	amazing	4440
team	15114	welcome	4435
engagement	14116	awards	4360
data	13275	visit	4334
management	13022	stop	4332
learning	12907	candidate	4303
future	12816	service	4200
learn	12735	guide	4197
world	11182	win	4192
company	11103	done	4183
workplace	10837	miss	4179
free	10794	hear	4174
change	10777	sales	4120
technology	10558	sure	4114
leaders	10015	become	4107
follow	9967	got	4100
tips	9825	google	4077
use	9703	innovation	4058
news	9699	daily	4043
social	9549	brand	4038
blog	9543	open	4037
way	9492	high	4034
better	9454	twitter	4033
hiring	9450	steps	4032
UK	9422	power	3950
performance	9171	industry	3949
tech	9140	ask	3932
right	9139	ever	3929
companies	9107	employer	3909
big	9070	coming	3904
first	8978	place	3872
global	8952	session	3862
culture	8943	hire	3861

leadership	8939	another	3859
things	8802	case	3857
experience	8665	feedback	3833
recruitment	8153	building	3829
event	7925	followers	3815
women	7821	advice	3794
webinar	7770	insights	3766
interview	7716	two	3740
key	7692	leave	3711
success	7455	payroll	3704
pay	7306	connect	3698
digital	7250	list	3698
conference	7171	feel	3671
development	7163	summit	3657
analytics	7091	market	3656
jobs	7069	linkedin	3645
start	7060	group	3618
manager	7049	makes	3617
human	6998	hope	3614
video	6784	effective	3609
recruiting	6681	focus	3598
london	6645	around	3587
training	6626	growth	3581
staff	6615	even	3574
live	6542	real	3552
benefits	6533	reasons	3536
workforce	6507	solutions	3521
part	6477	story	3506
trends	6440	services	3488
employers	6424	full	3487
using	6387	annual	3464
article	6366	study	3458
strategy	6356	mobile	3456
skills	6206	changing	3454
register	6164	per	3447
important	6056	taking	3427
workers	6056	teams	3412
ready	6014	talking	3408
everyone	6014	opportunity	3402
many	5962	stories	3387
going	5930	employment	3383
software	5860	gender	3381
still	5752	lead	3371
report	5741	businesses	3368
improve	5717	recent	3344
must	5698	resources	3336
career	5690	director	3327
ceo	5662	made	3324

support	5570	system	3317
meet	5551	thinking	3316
getting	5544	call	3313
managers	5543	five	3309
tomorrow	5487	productivity	3298
health	5487	thing	3290
research	5464	senior	3277
share	5410	diversity	3275
keep	5392	others	3260
process	5378	head	3250
create	5358	gap	3240
media	5293	bad	3236
making	5285	results	3232
interesting	5264	without	3221
morning	5256	home	3221
following	5253	customers	3214
survey	5170	infographic	3211
needs	5168	save	3207
office	5155	award	3180
post	5148	set	3178
stand	5075	manage	3171
please	5072	increase	3169
watch	5041	creating	3145
talk	5024	facebook	3140
candidates	4961	professionals	3140
marketing	4953	simple	3127
online	4859	challenges	3125
always	4833	solution	3120
impact	4821	content	3098
cloud	4795	organization	3090
role	4766	end	3084
days	4761	stay	3075
questions	4747	less	3042
successful	4728	proud	3042
show	4685	tell	3037
value	4672	engage	3028
never	4662	partner	3015

Appendix B. The top 250 hashtags after pre-processing

Hashtags	Occurrences	Hashtags	Occurrences
#hrtech	14555	#employerbranding	843
#leadership	13318	#interview	839
#employeeengagement	10895	#oracle	836
#recruitment	8927	#mentalhealth	833
#jobs	7628	#sales	829
#business	7514	#motivation	828
#recruiting	7391	#trudublin	828
#hrtechconf	6968	#employerbrand	826
#job	6956	#education	825
#hiring	5967	#rpo	822
#humanresources	5833	#newyear	820
#hrtechworld	5000	#wdayrising	815
#learning	4877	#love	809
#talent	4842	#interviewtips	807
#ai	4677	#performancemanagement	802
#management	4395	#webcast	796
#tech	4257	#employment	793
#quote	3636	#mercurioec	793
#bigdata	3627	#benefits	792
#payroll	3528	#in	792
#hris	3467	#change	790
#futureofwork	3350	#companyculture	787
#analytics	3301	#compliance	783
#hrnews	3244	#manager	779
#shrm	3091	#hrotoday	776
#cloud	2892	#linkedin	773
#technology	2837	#strategy	772
#engagement	2782	#cio	771
#hcm	2779	#wednesdaywisdom	765
#tchat	2745	#future	764
#workplace	2726	#apply	751
#peopleanalytics	2620	#cipdace17	735
#elearning	2614	#fridayfeeling	726
#employee	2517	#hrsso	726
#startup	2502	#blockchain	708
#training	2495	#uk	705
#hrtecheurope	2492	#predictiveanalytics	704
#innovation	2423	#influencehr	702
#talentmanagement	2411	#stress	700
#employees	2393	#social	692
#career	2366	#newyou	690
#nextchat	2317	#changeboardft	680
#data	2300	#cipd15	679
#diversity	2231	#cx	678

#leaders	2230	#hrtrends	674
#work	2211	#hrchat	674
#workhuman	2152	#thestreet	670
#hranalytics	2110	#talentnet	656
#culture	2038	#wellness	651
#workforce	2028	#winniesun	651
#digital	1971	#entrepreneur	647
#webinar	1950	#procurement	647
#marketing	1935	#genderpay	643
#podcast	1877	#hrtribe	634
#socialmedia	1823	#worktrends	632
#hrblog	1807	#backgroundscreening	628
#hrblogs	1739	#networking	627
#ceo	1725	#christmas	627
#hrjobs	1688	#iwd2017	626
#onboarding	1657	#health	626
#jobadvicesa	1611	#healthcare	625
#singapore	1588	#leadershipdevelopment	621
#ff	1522	#design	618
#jobhuntchat	1521	#leader	604
#wellbeing	1514	#mindfulness	604
#gamification	1506	#peopleanalytics15	604
#wsj	1497	#retention	601
#gdpr	1467	#landd	601
#mondaymotivation	1444	#inspiration	599
#peopleskills	1394	#ukjobs	595
#ukemplaw	1386	#artificialintelligence	594
#team	1385	#retail	590
#nytimes	1378	#storify	589
#candidateexperience	1373	#compensation	587
#productivity	1367	#chro	583
#careers	1357	#shrm16	576
#london	1356	#smallbiz	567
#millennials	1319	#predictive	565
#saas	1319	#gigeconomy	564
#genderpaygap	1314	#vr	562
#talentacquisition	1290	#collaboration	561
#it	1265	#women	548
#blog	1264	#smarterhr	546
#managers	1255	#feedback	540
#development	1249	#brand	537
#cipd	1241	#nelsonhall	532
#iot	1213	#automation	525
#datascience	1201	#reward	525
#performance	1176	#socialrecruiting	517
#success	1169	#followfriday	514
#reuters	1169	#hruhelsinki	514
#jobsearch	1144	#hrsolutions	511

#birchman	1144	#shrmvls	510
#recruiters	1133	#python	509
#cipdldshow	1104	#emotionalintelligence	507
#hrsoftware	1104	#cipdace16	506
#employeeexperience	1098	#inspirefest	506
#brexit	1096	#trends	505
#winning	1089	#cfo	503
#sap	1085	#emotionalagility	502
#machinelearning	1070	#jimmyfallon	501
#hrevent16	1066	#digitalmarketing	500
#hrhappyhour	1032	#eq	498
#startups	1022	#communication	491
#mobile	1015	#hro	490
#lms	1014	#irishjobs	487
#fintech	1004	#candidates	485
#digitaltransformation	1001	#womenintech	485
#software	990	#hrms	484
#hrcorelab	990	#cybersecurity	480
#coaching	979	#roi	476
#newcareer	965	#jobfairy	476
#bloomberg	950	#teamwork	470
#latinamerica	934	#talent42	470
#infographic	932	#starterpad	469
#skills	922	#hrhour	467
#hrpro	917	#quotes	464
#shrm17	914	#futureofhr	463
#rocketship	884	#hrdata	462
#hirethebest	882	#ldinsight	461
#edtech	875	#forbes	460
#hcmworld	872	#sourcing	457
#internalcomms	865	#flow	453
#video	854	#inclusion	452
#finance	853	#df17	450

Social media have revolutionized the way we communicate, making space for diverse voices to be heard. But their impact on communities of actors, or institutional fields, has been largely overlooked. This dissertation introduces the concept of "digital fields" to understand the interactions and discourse of these communities in the social-media landscape. Specifically, it delves into the world of digital Human Resource Management (digital HRM) on Twitter, currently known as X. Digital HRM uses technology to make HRM practices and activities more efficient and strategic, thus offering an intriguing context for studying digital fields.

This dissertation offers a fresh approach to studying digital HRM using social-media data and combining computational and qualitative research traditions. Most importantly, it advances HRM research by identifying a broader set of actors and practices shaping the development of the digital HRM field through relationships and discourse.

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